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THE PLANNING OF NEW RESIDENTIAL AREAS IN EDMONTON 1950 - 1976

by

© ROBERT RAY GRADEN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

AND RESEARCH IN PARTIAL FULFILLMENT

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OF MASTER OF ARTS.

DEPARTMENT OF GEOGRAPHY

EDMONTON, ALBERTA

FALL, 1979.

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled "The Planning of New Residential Areas in Edmonton, 1950-1976" submitted by ROBERT RAY GRADEN in partial fulfillment of the requirements for the degree of Master of Arts.

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ABSTRACT

In structuring the residential environment of Edmonton, two design concepts, the Neighbourhood Unit and the Outline Plan Concepts were applied. The Neighbourhood Unit Concept was applied in response to the needs that were anticipated as a result of a large increase in population after 1947. It was realized that the existing grid-iron pattern of subdivision was no longer adequate, especially in meeting the needs for well-planned schools, parks and playgrounds, shopping and institutional facilities, and safety in the local street layout.

A change in scale from neighbourhood size planning units to much larger units, termed outline plan areas, was based largely on perceived inadequacies with the smaller scale neighbourhood unit. In particular, Edmonton planners decided in their evaluation that the larger outline plan area would function as a more effective community service area than the smaller neighbourhood unit. It was also decided that planning larger units in anticipation of growth allowed for a more orderly and economical provision of public utilities and roadway construction. These conclusions, however, were based more on the planners' experiences with the inadequacies of the Neighbourhood Unit Concept rather than on any careful re-evaluation of the concept itself.

The purpose of this study was to examine the shift to large scale planning units as a means of structuring the residential environment of Edmonton. In particular, an attempt was made to determine whether any careful re-evaluation was done of past designs and whether the Outline Plan Concept had produced a more satisfactory living environment from the viewpoint of the resident. The study, however, was not intended to offer rigidly tested hypotheses or guidelines for general application. Its aim was to raise rather than to resolve issues.

The research was conducted in two steps. The first included an analysis of city planning reports and documents followed by personal interviews with planning officials. The second step involved the collection, analysis and interpretation of data on residents' satisfaction with the Richfield Neighbourhood Unit in Mill Woods, through the use of a structured questionnaire interview.

A major conclusion of this study was that Edmonton's planners did not carefully re-evaluate the effectiveness of the designs which they utilized. The change to the use of large scale planning units appeared to be done primarily for the sake of order and economy in suburban development, and not necessarily for the purpose of creating more satisfactory living environments. Intuitively, the outline plan was seen to be a more convenient means of ordering the residential environment, since it is based essentially

on a hierarchical arrangement of service facilities distributed over relatively large areas of suburban land. However, if re-evaluation had been done, Edmonton's planners would have discovered that this larger and more orderly arrangement has not necessarily produced more satisfactory living environments as was evidenced by the responses of the residents of the Richfield Neighbourhood Unit.

There were, however, limitations with the Richfield Neighbourhood Study. For example, it could not be determined whether planners are designing more satisfactory living environments now than they did during the 1950s. Further research would be required, in which several neighbourhoods planned and developed during the different time periods are examined.

ACKNOWLEDGMENTS

The writer wishes to express his thanks to Dr. D. B. Johnson who supervised this thesis, especially for his constant encouragement, patience and understanding. Thanks are also extended to Dr. P. J. Smith for his encouragement and assistance during the early and latter stages of the thesis, and to Dr. W. McVey and Dr. L. Kennedy for their assistance in formulating the sampling frame and questionnaire. Further thanks are extended to the many planners who contributed valuable first-hand information, particularly N. Dant, P. Elwood, R. Plunkett and the planning staff of the Mill Woods planning office.

I would also like to express my appreciation to the City of Edmonton, Planning Department librarians and the City Clerk's office staff for their help in locating reference material. Also, the questionnaire survey could not have been conducted without the cooperation of the many residents of the Richfield neighbourhood in Mill Woods. Special thanks are due to John Honsacker for his computer programming assistance and to Jack Chesterman, Randy Pakan, and Geoff Lester for their assistance in reproducing maps and other illustrative material. Finally, I wish to express my sincere thanks to Mrs. King for her very competent typing job of this thesis, and to my wife Shirley, for her patience and understanding during its preparation.

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INTRODUCTION

> The job of the city planner is to propose courses of action, not to execute them. And, although his plans deal directly with only the physical city, their professed object is always to improve the total quality of urban living.[1]

Since more of a city's land is used for residential and associated functions than for any other single purpose, it is assumed that the residential sector is also the most extensive single contributor to spatial change. This has led McCann to claim that "it warrants immediate attention, not only for contributing to a theory of urban growth and change, but also for contributing much needed information to the urban planning process."[2]

The purpose of this thesis is to examine the changes in the planning of new residential areas in Edmonton from 1950 to 1976. During the 1950s, Perry's 'Neighbourhood Unit Concept' was used as the model for residential design as described by Chan in her thesis entitled, The Impact of

---

[1] A. A. Altshuler, The City Planning Process, Cornell University Press, Ithaca, New York, 1965, p. 1.

[2] L. McCann, Neighbourhoods in Transition: Processes of Land Use and Physical Change in Edmonton's Residential Areas, University of Alberta, Department of Geography, 1975, p. 1.

the Technical Planning Board on the Morphology of Edmonton.[3] Beginning about 1960, however, this model was no longer followed so closely in the design of new residential areas as the City of Edmonton shifted to the Outline Plan Concept of schematic planning for much larger areas of suburban land. This evolution of planning ideas parallels the experience of Calgary as described by Harasym in his thesis entitled, The Planning of New Residential Areas in Calgary: 1944-1973.[4]

The organizing concept for this thesis focusses on three objectives. The first objective is to describe the changes that took place in residential planning in Edmonton from 1950 to 1976. The second objective is to explain these changes, while the third presents a resident evaluation of the Richfield Neighbourhood Unit in the Mill Woods Outline Plan area. Within this conceptual framework, three propositions are considered:

(1) Through experience, Edmonton planners perceived certain inadequacies with the Neighbourhood Unit Concept.

(2) As Edmonton became larger, planners attempted to structure a more complex hierarchical arrangement of service facilities.

---

[3] W. Chan, The Impact of the Technical Planning Board on the Morphology of Edmonton, unpublished M.A. thesis, University of Alberta, Edmonton, 1969.

[4] D. Harasym, The Planning of New Residential Areas in Calgary: 1944-1973, unpublished M.A. thesis, University of Alberta, Edmonton, 1975.

(3) As a result of (1) and (2), a new concept emerged, the Outline Plan Concept, a plan preparation process used in the planning of new residential areas.[5]

From an early stage in this thesis research, it became evident that there were three distinct periods in residential design. During the first period, prior to 1950, the grid pattern of subdivision was the norm. In the second stage, during the 1950s, the Neighbourhood Unit Concept was applied as the basic concept behind the functional and spatial organization of new residential development. This concept, as described by Clarence Perry in the 1920s, suggested that each neighbourhood should be limited in size and focus on a centrally located elementary school.[6] In addition, each neighbourhood should have well-defined boundaries, adequate park space and shopping facilities, and a safe internal street system.

The modern concept of planned neighbourhoods can be traced back to nineteenth century urban reformers who were concerned about the pathological effects and dreary uniformity of mass housing in Britain and the United

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[5] F. S. Chapin, Jr., Urban Land Use Planning, University of Illinois Press, Urbana, 2nd ed., 1965, p. 458.

[6] C. A. Perry, Housing for the Machine Age, Russell Sage Foundation, New York, 1939.

States.[7] However, it was Perry who gave the neighbourhood definition and who popularized it among influential planners and architects, such as Lewis Mumford, Clarence Stein, and Henry Wright. For example, Stein's Towards New Towns for America, published in 1957, illustrates the practical response to the Neighbourhood Unit Concept in the shape of several experimental neighbourhoods built between the two World Wars.[8]

In Edmonton's third stage, after 1960, another design concept emerged. This was the Outline Plan Concept, which incorporated most of the neighbourhood unit principles but was applied over a much larger planning area. Rather than focussing on an elementary school, the outline plan area is organized around a town centre, a concept described by Humphrey Carver in Cities in the Suburbs.[9] However, unlike Carver's town centres, Edmonton's usually include a large shopping complex, an educational campus, high density housing, medical facilities, cultural and entertainment facilities, and the hub of public transportation facilities.

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[7] E. Howard, Garden Cities of Tomorrow, Faber and Faber, London, 1945. See also: S. B. Sutton, Civilizing American Cities: A Selection of Frederick Law Olmsted's Writings on City Landscapes, MIT Press, Cambridge, Mass., 1971, pp. 292-305.

[8] C. S. Stein, Towards New Towns for America, MIT Press, Cambridge, Mass., 1957.

[9] H. Carver, Cities in the Suburbs, University of Toronto Press, Toronto, 1962.

METHODS OF STUDY

The study was conducted in two stages. The first involved an analysis of planning reports and files, and personal interviews with planners. Other information sources included the City Clerk's files, minutes of the Edmonton Municipal Planning Commission, City Council minutes, provincial planning laws, municipal bylaws, past theses', air photographs, land use maps, and field surveys. Unfortunately, many other planners who were involved in residential design during the 1950s and 1960s could not be contacted for interviewing. Furthermore, many planning documents that may have proved useful in explaining the rationale behind the change to large scale planning were not available.

The second stage involved the collection, analysis and interpretation of data on residents' evaluations of a planned neighbourhood through the use of a structured questionnaire interview. Prior to the administration of the final questionnaire a pilot study was carried out, which resulted in some changes being made to the questionnaire. 196 personal interviews were attempted and 169 were completed during the months of February and March, 1978. This provided a response rate of 86 per cent.

A systematic sampling technique was employed, whereby

every fifth household in the neighbourhood was approached, after the first household was randomly selected. For those households where the husband, wife, or primary tenant was not home, a replacement method was employed after three call-backs. The replacement was the next household in line along a route that was predetermined through the use of a map of the neighbourhood. Replacements were not used for refusals, the household simply being dropped from the sample.

OUTLINE OF THE STUDY

Chapter one opens with an outline of the major events which led to the establishment of modern town planning in Edmonton. It continues with a description of the Neighbourhood Unit Concept and concludes with an analysis of two examples of its early application to Edmonton.

Having established this background, chapter two moves on to a discussion of the change to larger scale planning units termed outline plan areas. In particular, the reasons for this change are described and explained, and two examples of the early application of the Outline Plan Concept are presented.

In 1967, the General Plan for Edmonton was published, and from that time to the close of this thesis, the emphasis has been on large scale planning and development

through the use of the Outline Plan Concept. Chapter three therefore begins with a description and explanation of the concept, and concludes with an analysis of the goals and objectives for outline plan areas.

Chapter four examines the Mill Woods area as an example of the use of the Outline Plan Concept. It begins with an analysis of the various land uses and concludes with the results of a study conducted among the residents of the Richfield Neighbourhood Unit in the Mill Woods Outline Plan area.

Chapter five presents some conclusions about the change to the use of large scale planning units. Two fundamental questions are addressed. First, did re-evaluation take place to discover whether an effective design had been used after development had occurred? Second, has the change to large scale planning units produced a more satisfactory living environment from the viewpoint of the resident? Both questions must be considered if it is to be determined whether or not the quality of residential design in Edmonton has improved to any great extent over the past two decades.

CHAPTER 1

MODERN FOUNDATIONS OF RESIDENTIAL PLANNING IN EDMONTON: 1950-1959

The year 1949 marked a turning point in the history of Edmonton's town planning. In that year, Edmonton City Council appointed its first town planner who was entrusted to establish a Town Planning Department. City Council also engaged the services of Professors Bland and Spence-Sales, planning consultants from McGill University. They were to examine and report on the physical development of the city and the administrative organization.[1] Their recommendations led to the establishment of a Technical Planning Board to handle the technicalities of town planning, and a planning advisory committee to handle matters of public relations.[2]

Perhaps their most important recommendation was that the City Council should resolve to plan the city within

---

[1] J. Bland and H. Spence-Sales, A Report on the City of Edmonton Concerning the State of Physical Development and Administration Under the Provisions of the Town Planning Act, Edmonton, 1949.

[2] For a more detailed discussion of the Technical Planning Board see: W. Chan, The Impact of the Technical Planning Board on the Morphology of Edmonton, unpublished M.A. thesis, University of Alberta, Edmonton, 1969.

the full meaning of the Planning Act of 1929; and, should impose Interim Development Control pending the preparation of an official plan. Also, recognizing that urban growth was closely associated with rural development, the professors strongly recommended the establishment of a District Planning Commission. At their recommendation, the Edmonton District Planning Commission was established in 1950 (now the Edmonton Regional Planning Commission).

A significant change that occurred in residential planning at this time, and one that is particularly important to this thesis, was the introduction to Edmonton of Perry's 'Neighbourhood Unit Concept'.[3] Prior to 1950, the city's residential areas were being planned and developed on a regular gridiron pattern of subdivision and it was recommended by Professors Bland and Spence-Sales that further development be patterned on neighbourhood unit principles.[4] Hence, since 1950 the 'Neighbourhood Unit Concept' has been one of the most influential residential design concepts applied to Edmonton.

It is the purpose of this chapter to describe and explain the initial application of neighbourhood unit principles to Edmonton. The chapter begins with a brief discussion of the influence of the federal agency, Central

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[3] C. A Perry, Housing for the Machine Age, Russell Sage Foundation, New York, 1939.

[4] Bland and Spence-Sales, op. cit. p. 17.

Mortgage and Housing Corporation, on residential planning in Edmonton and continues with an analysis of the effects of replotting schemes. It then goes on to examine the effects of the Subdivision and Transfer Regulations on residential planning and concludes with a description of the principles of the 'Neighbourhood Unit Concept' and an examination of two residential areas of the city planned and developed, during the early 1950s, on neighbourhood unit principles.

Central Mortgage and Housing Corporation

Most of the loans for housing constructed in Canada throughout the period covered by this thesis have been guaranteed by the federal government through a series of national housing acts which began in 1944. The initial act authorized the establishment of a new crown agency, Central Mortgage and Housing Corporation (C.M.H.C.), which was charged with carrying out the terms of the act, viz., "to promote the construction of new homes, the repair and modernization of existing houses and the improvement of housing and living conditions."[5] Furthermore, and more importantly from the point of view of this study, C.M.H.C. was required to encourage the development of sound

---

5 Government of Canada, National Housing Act. Ch. N.-10, 1970.

community planning.[6]

Although the responsibility for urban planning rests with the provinces and municipalities, C.M.H.C. has had a strong influence on the planning of residential areas throughout the country. As an insurer or lender of money for housing, C.M.H.C. was eager to protect its investment and because of this concern, insisted on reviewing subdivisions which involved housing loans under the Act.

To raise the quality of housing and at the same time keep costs down, C.M.H.C. began to encourage the adoption of minimum standards based on concepts of public health. The first step towards this objective was the encouragement of the use of planned house groupings. An early and noticeable result of this policy was the housing constructed for war veterans and armed forces personnel.

Primarily because of C.M.H.C.'s preferences for planned unit developments, the city, rather than allowing housing construction to continue on the gridiron pattern, began to make modifications to the subdivided land by incorporating variations based on neighbourhood unit principles. These changes included curved streets, culs-de-sac, centrally located parks and schools, and easily accessible neighbourhood stores. Although C.M.H.C. never insisted that new neighbourhoods conform exactly to Perry's

---

[6] Central Mortgage and Housing Corporation, Site Planning Handbook, 1966, p. 3.

physical model, his principles were clearly endorsed.

Replotting Schemes in Edmonton

After 1947, the City of Edmonton experienced a dramatic increase in population (Figure 1). Also at that time the city was ringed by many acres of undeveloped land, subdivided in large and small parcels, the aftermath of land speculations as far back as the first decade of the century. If the city was to develop these lands on neighbourhood unit principles it was first necessary to cancel and resubdivide the existing subdivisions. This was carried out through replotting schemes which were provided for under the Town Planning Act of 1942.[7]

Briefly, a replotting scheme was the cancellation of an existing plan of subidivision, the consolidation of any parcels of land within the subdivision into one area, and finally, the planning of a new subdivision of the consolidated area. The land in the new subdivision was then redistributed among the owners of lands in the cancelled subdivision. However, before such a scheme could be carried out, it was necessary that consent be given in writing by owners of 60 per cent of the number of parcels affected by the scheme, providing that their properties

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7 Province of Alberta, Planning Act, Chapter 169, Section 37, 1942.

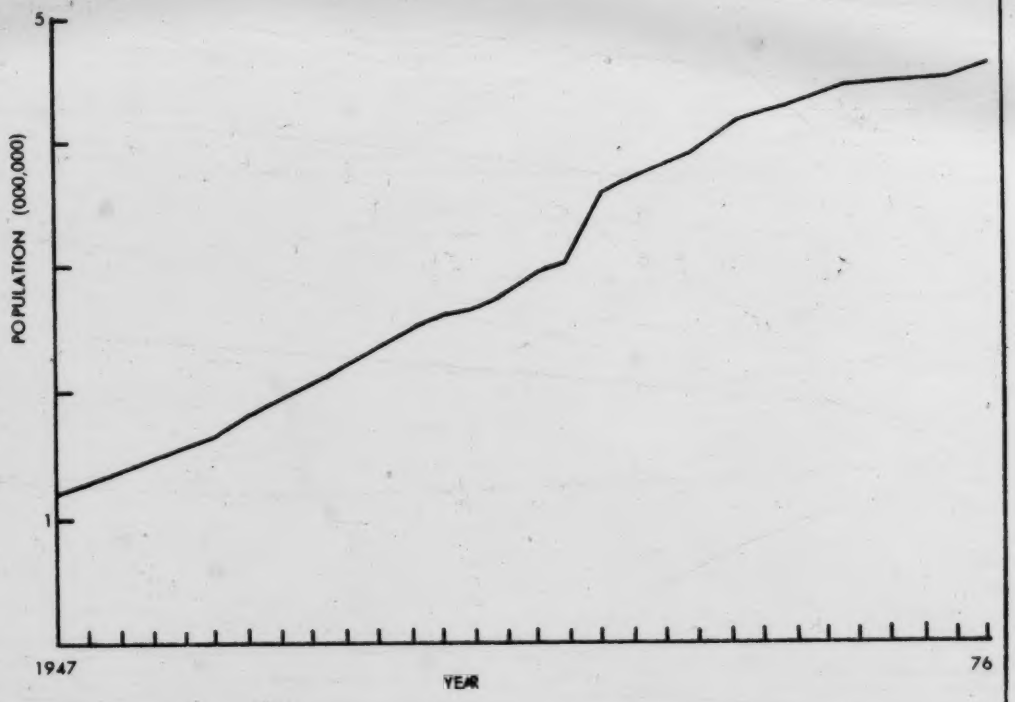

FIGURE 1

POPULATION GROWTH-EDMONTON

1947-1976

Source: City of Edmonton, Civic Census

accounted for 60 per cent of the total assessed value of the area under replot.

In Edmonton, replotting schemes were made simpler, since much of the prematurely subdivided land had reverted back to the city as a result of earlier tax defaults. This was authorized through the Tax Recovery Act of 1919, which allowed the city to take possession of such lands in arrears of taxes. As Dale pointed out, between 1920 and 1945, tax-forfeited lands amounted to 56 per cent of the total area of the city.[8] Consequently, in many earlier instances, as the city was the owner of a large portion of the land to be replotted, it could easily fulfill the 60 per cent land ownership and consent requirements. Similarly several of the large local builders who generally favoured neighbourhood plans helped to buy up blocks of land in the proposed areas to satisfy the 60 per cent requirement. Hence, replotting schemes were very popular during the 1950s and most of the new neighbourhoods developed during this time were re-subdivided under replotting procedures.

The extent of the replotting schemes adopted from 1947 through 1957 is shown on Figure 2. It is clear that a substantial number of the replots occurred at the periphery of the city on the prematurely subdivided, though very

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[8] E. Dale, The Role of Successive Town and City Councils in the Evolution of Edmonton, Alberta: 1892 to 1966, unpublished Phd. thesis, University of Alberta, Edmonton, 1969, p. 166.

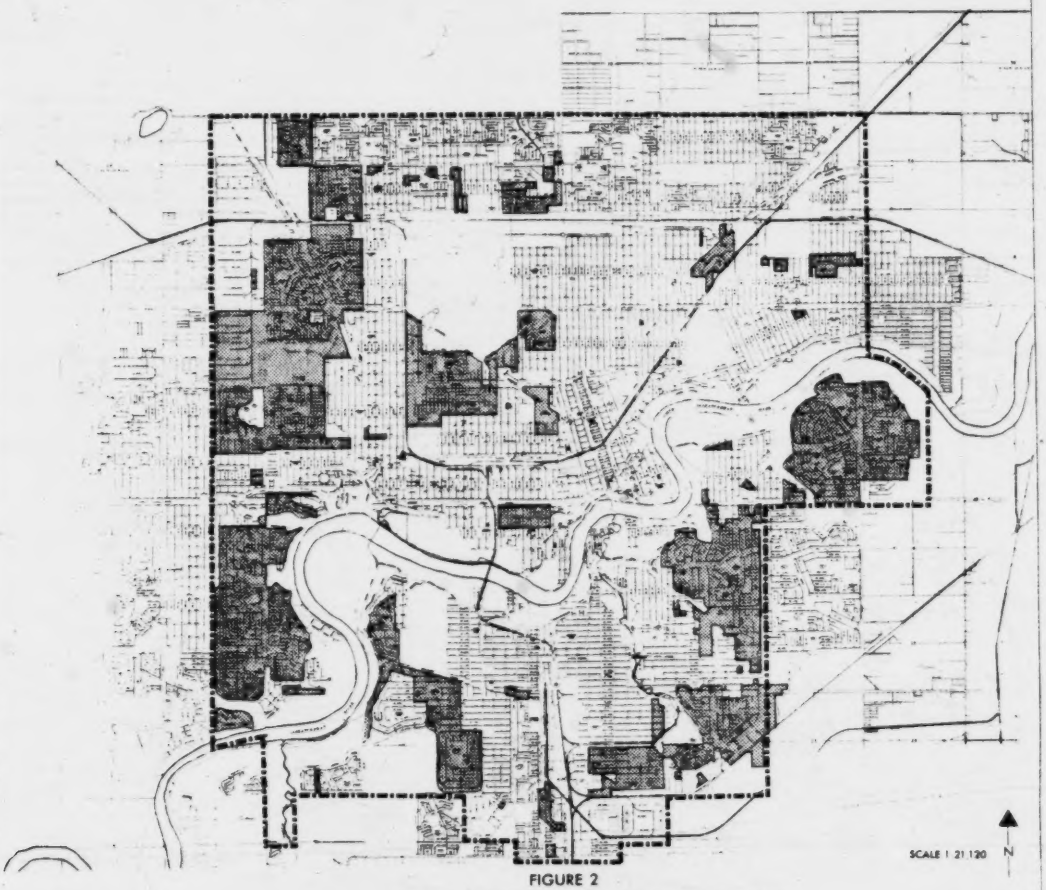

FIGURE 2

REPLOTTING SCHEMES-EDMONTON
1947-1957

CITY BOUNDARY, 1957

REPLOT AREA

SOURCE: CITY OF EDMONTON, PLANNING DEPARTMENT

little developed land. Subsequently, on October 24, 1960, City Council adopted all the replots approved prior to this date as part of the evolving General Plan.[9]

Subdivision and Transfer Regulations

The Subdivision and Transfer Regulations have had a major impact on residential land use by providing detailed standards for the subdivision of land. Pursuant to the Surveys and Expropriation Act and the Planning Act, the Subdivision Regulations and Transfer Regulations were passed in 1953 and 1954 respectively.[10] Under these regulations, the Technical Planning Board was designated to be the approving authority for all subdivisions and transfers within the City of Edmonton. Under the regulations, subdivision meant "an area of land which has been divided into two or more parcels whether by plan or by description or otherwise," and transfer meant "any such sale, lease, mortgage or charge or agreement to sell, lease, mortgage or charge or any other document or act as is referred to in section 25(1) of the Act."[11]

---

[9] City of Edmonton, Council Minutes, October 24, 1960.

[10] The Subdivision Regulations passed by O.C. 969-53, Alberta Gazette, July 15, 1953: and The Town and Rural Planning (Transfer) Regulations - O.C. 167-54, Queens Printer, Edmonton.

[11] Province of Alberta, Subdivision Regulations, Section 2, and Transfer Regulations, Section 2.

Within the terms set by the definitions, the regulations specified conditions which had to be met before land could be subdivided or transferred. Section 4 states:

> No land shall be subdivided unless it is suited to the purpose for which it is intended, having regard to:
> (a) the nature of the soil,
> (b) surface drainage,
> (c) the danger of (i) flooding,
> (ii) subsidence,
> (iii) erosion,
> (d) accessibility, and
> (e) the use of the land in the immediate vicinity.[12]

After the feasibility for subdivision was determined, further restrictions were imposed. Section 14 states:

> Land shall only be subdivided in the manner which is most desirable and practicable, taking into account:
> (a) the topography and physical condition of the land;
> (b) the use or proposed use of the land;
> (c) the economical use of land with respect to the proportion of the area devoted to streets and lanes;
> (d) the segregation of traffic flow as between main thoroughfares and minor or residential streets;
> (e) the economical provision of utilities and services;
> (f) the desirability of the view or aspect of each lot or parcel, and:
> (g) the convenience of access to each lot or parcel as the dimensions affect the usefulness of the lot or parcel.[13]

As will be seen, these general principles are basic to neighbourhood unit planning since they correspond closely

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12 Subdivision Regulations, Section 4.

13 Subdivision Regulations, Section 14.

to several of Perry's principles. For example, Perry advocated the use of arterial streets to divert traffic around a residential area rather than through it. Also he suggested that a neighbourhood should be provided with a special street system, with each street being proportioned to its probable traffic load, Similarly, the Subdivision Regulations require the segregation of traffic flow between main thoroughfares and minor residential streets. The 'Neighbourhood Unit Concept' requires a road hierarchy, a requirement which is also implied in Section 14, part (C) - the economical use of land with respect to the proportion of the area devoted to streets and lanes. It is not economical to have wide streets for residential traffic only, since the roads would be underused. The excessive road area could be better devoted to parks or housing.

THE NEIGHBOURHOOD UNIT CONCEPT

In a preliminary study in 1926, and in a report published by the committee on the Regional Survey of New York and Its Environs, in 1929, Clarence Perry enunciated his 'Neighbourhood Unit Concept'.[14] The concept employs a

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[14] C. A. Perry, "The Neighbourhood Unit," monograph as part of "Neighbourhood and Community Planning," Regional Survey of New York and Its Environs, vol. III, New York: Committee on Regional Plan of New York and Its Environs, 1929, reissued in Perry, Housing for the Machine Age, New York: Russell Sage Foundation, 1939.

physical planning technique for integrating the development of ancillary services with housing. It was the first description of a completely self-contained community within a surrounding urbanized territory; a community of about 5,000 people on an area of about 160 acres. The scheme, however, recognized the urban neighbourhood as being both a unit of a larger whole and a distinct entity in itself.

Perry, inspired by the spirit of the reform movement in the United States and grappling with the emerging urban evils of New York City, saw in the 'Neighbourhood Unit Concept' a vehicle for citizen participation and political reform. He was concerned with the anonymity which most citizens seemed to prefer and especially with the laxity and apathy which was evidenced with regard to civic matters. Perry proposed to awake citizen involvement by appealing to the householder's natural and tenacious attachment to his property and his concern with all that affected it. He further proposed to focus this enlightened self-interest on a physical area which was large enough to carry political weight yet small enough to ensure that the individual ratepayer might feel sufficiently motivated to maintain an active participation in all matters affecting it.

Perry was also inspired by and attributed many of his ideas on the concept to landscape architect Frederick Law Olmsted. Olmsted designed Forest Hills Gardens, a New York suburb, to which Perry gave credit for many of his ideas.

When Perry analyzed Forest Hills into its essential elements, he found that they constituted the main principles of his ideal neighbourhood.[15]

Neighbourhood Unit Principles

Perry formulated his neighbourhood unit principles from his concern for the poor conditions existing in large cities generally and New York City in particular. He felt that there were three basic factors which contributed to these poor conditions. First was an economic factor, the notion of functional obsolescence whereby an area or building becomes obsolete for the function it was meant to perform. Second was a convenience factor. He realized that as a city began to expand outwards there became a need for the dispersal of services to satisfy the needs of the residents. Finally there was a safety factor. He felt that the traditional grid street system minimized safety and was hazardous, especially for pedestrians.

To overcome these difficulties Perry recommended the neighbourhood as a guide to organizing residential space; a scheme of arrangement for the family-life community. In doing so, he specified the following six principles:

1. Size - A residential unit development should provide housing for that population for which one elementary school is ordinarily required,

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[15] Perry, p. 211.

its actual area depending upon its population density.

2. Boundaries - The unit should be bounded on all sides by arterial streets, sufficiently wide to facilitate its by-passing, instead of penetration by through traffic.

3. Open Spaces - A system of small parks and recreation spaces, planned to meet the needs of the particular neighbourhood should be provided.

4. Institutional Sites - Sites for the school and other institutions having service spheres coinciding with the limits of the unit should be suitably grouped about a central point or common.

5. Local Shops - One or more shopping districts, adequate for the population to be served should be laid out in the circumference of the unit, preferably at traffic junctions and adjacent to similar districts of adjoining neighbourhoods.

6. Internal Street System - The unit should be provided with a special street system, each highway being proportioned to its probable traffic load, and the street net as a whole being designed to facilitate circulation, within the unit and to discourage its use by through traffic.[16]

Figure 3 illustrates Perry's principles. The population (approximately 5,000) served by an elementary school sets the neighbourhood scale (the school incidentally was viewed by him not so much as a defining criterion for the neighbourhood, the present interpretation, but as a political meetinghouse in which neighbours could gather to thrash out local issues). The school, centrally located,

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[16] Perry, p. 51.

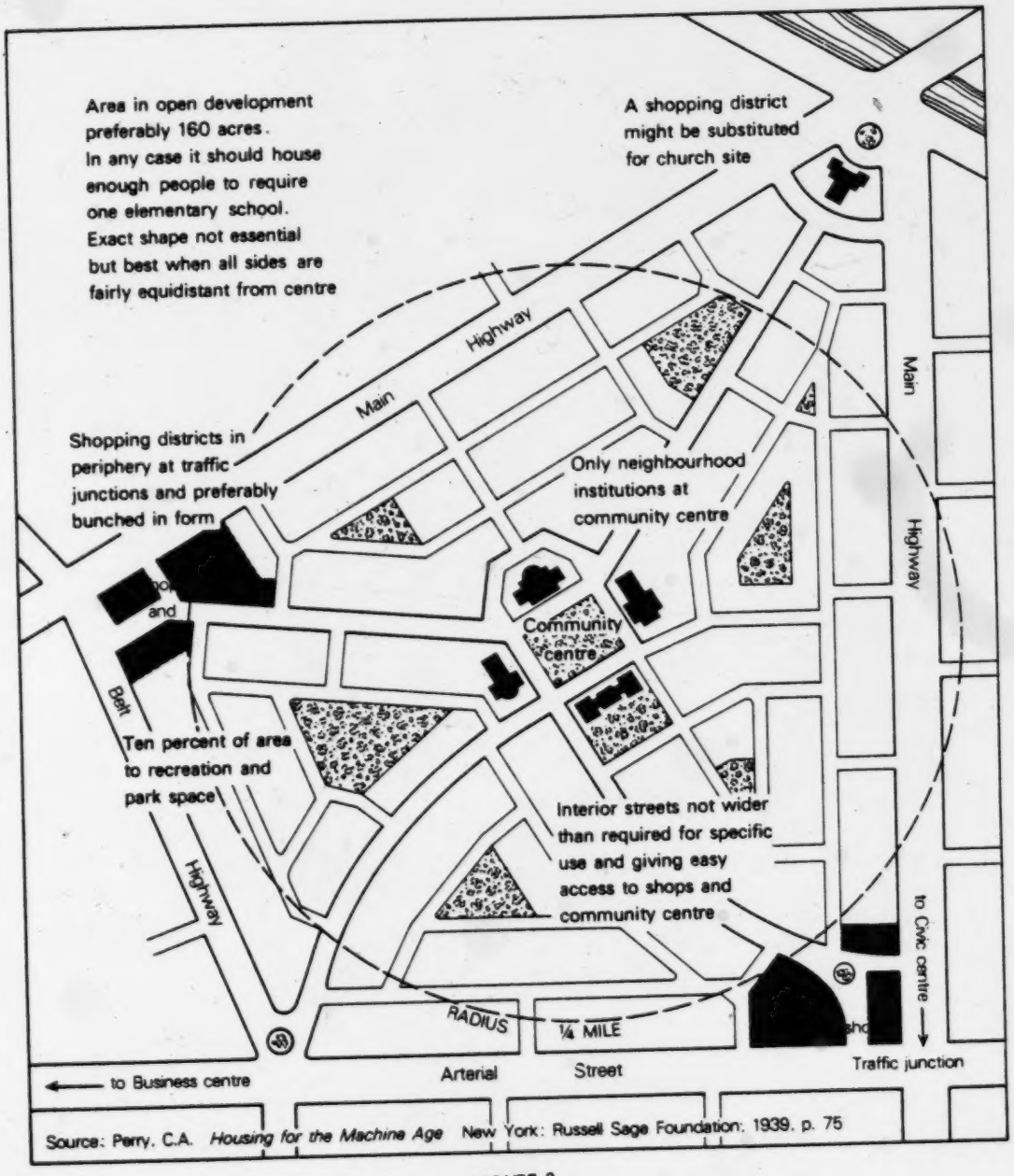
Area in open development preferably 160 acres. In any case it should house enough people to require one elementary school. Exact shape not essential but best when all sides are fairly equidistant from centre
A shopping district might be substituted for church site
Highway
Main
Shopping districts in periphery at traffic junctions and preferably bunched in form
Only neighbourhood institutions at community centre
Main
Highway
Community centre
Belt
Ten percent of area to recreation and park space
Interior streets not wider than required for specific use and giving easy access to shops and community centre
Highway
to Civic centre
RADIUS
¼ MILE
to Business centre
Arterial
Street
Traffic junction
Source: Perry, C.A. Housing for the Machine Age New York: Russell Sage Foundation: 1939. p. 75

FIGURE 3

NEIGHBOURHOOD UNIT PRINCIPLES

is within a quarter-mile walking distance of the furthest residence and 10 per cent of the area is set aside for parks and recreation. Furthermore, the neighbourhood gains identity and unity through its internal street system and boundary arterials.

It must be pointed out that the six principles alone do not constitute a plan. For this reason, Perry did not set any rigid framework on the actual design of his neighbourhood. He realized that there could be no stereotyped neighbourhood pattern; each unit must be designed according to local circumstances, such as the topography of the site and the needs of the people.

Perry's 'Neighbourhood Unit Concept' has not gone without criticism. For example, Carver pointed out an inherent contradiction in Perry's plan when he said: "Perry wanted the heart of the family neighbourhood to be a quiet, traffic-free place and at the same time he wanted it to be an active community centre."[17] Porteous claimed, that the Neighbourhood Unit Concept seemed to be less valid as a framework for social interaction, which typically takes place in smaller areas. In his words: "planning at the small neighbourhood level should be more concerned with the effect of physical environment on social interaction and the provision of low-order amenities such as corner

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17 H. Carver, Cities in the Suburbs, University of Toronto Press, Toronto, 1962, p. 59.

stores and tot lots."[18]

Nonetheless, the neighbourhood as propounded by Perry has been generally accepted in North America as the basic component piece of suburban design. It has been expanded upon, for example, by Dahir, who produced a set of regulations, specifications and development guides which are still regarded as the formats to be followed in planning residential areas.[19] It has also been adopted by many different cities, including Edmonton.

With few exceptions, most notably prestigious Capitol Hill, land subdivision in Edmonton prior to 1950 was based on the grid system and most of the immediate postwar growth was absorbed into these partially developed grid subdivisions. According to Edmonton's City Planner, W. R. Brown, there had existed thirty-three grid "neighbourhoods" prior to 1950.[20] Postwar construction, with few exceptions resulted in monotonous and endless extensions of streets on the gridiron plan, in accordance with subdivision designs that were laid down in the early 1900s. However, by 1950, most of the serviced land supply was exhausted and infilling of these grid subdivisions had nearly been

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[18] D. Porteous, Environment and Behavior: Planning and Everyday Urban Life, Addison-Wesley, 1977, p. 86.

[19] J. Dahir, The Neighbourhood Unit Plan: Its Spread and Acceptance. New York: Russell Sage Foundation, 1947.

[20] Letter from W. R. Brown to P. G. Davies, January 21, 1959.

completed. It was therefore recommended by Professors Bland and Spence-Sales that further development be patterned on neighbourhood unit principles.[21] New development was subsequently concentrated on virgin land, much of which was forfeited to the city through tax defaults in the years after World War I. On land that was not city-owned, replotting schemes were applied. Hence, by 1950, the city had assumed almost absolute control over its development. This was important, since new residential areas could now be patterned on neighbourhood unit principles.

Parkallen - The First Planned Neighbourhood Unit

The neighbourhood unit plan was authorized by City Council in 1951, when it passed By-Law 1379, which prescribed regulations to be observed in the development of Parkallen District and of subsequent areas yet to be approved by the council.[22]

Parkallen was originally made up of Bridgeland, Martin Estate and Beau Park as shown on Figure 4. Although the area was subdivided, very few of the lots had actually

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[21] Bland and Spence-Sales Report, September 9, 1949, p. 17.

[22] By-Law 1379. A By-Law respecting "The Parkallen Neighbourhood Unit Development Area" and prescribing regulations to be observed therein and also in other areas of land subsequently approved by council for similar development except where specially modified in respect to such other areas. City of Edmonton, May 14, 1951.

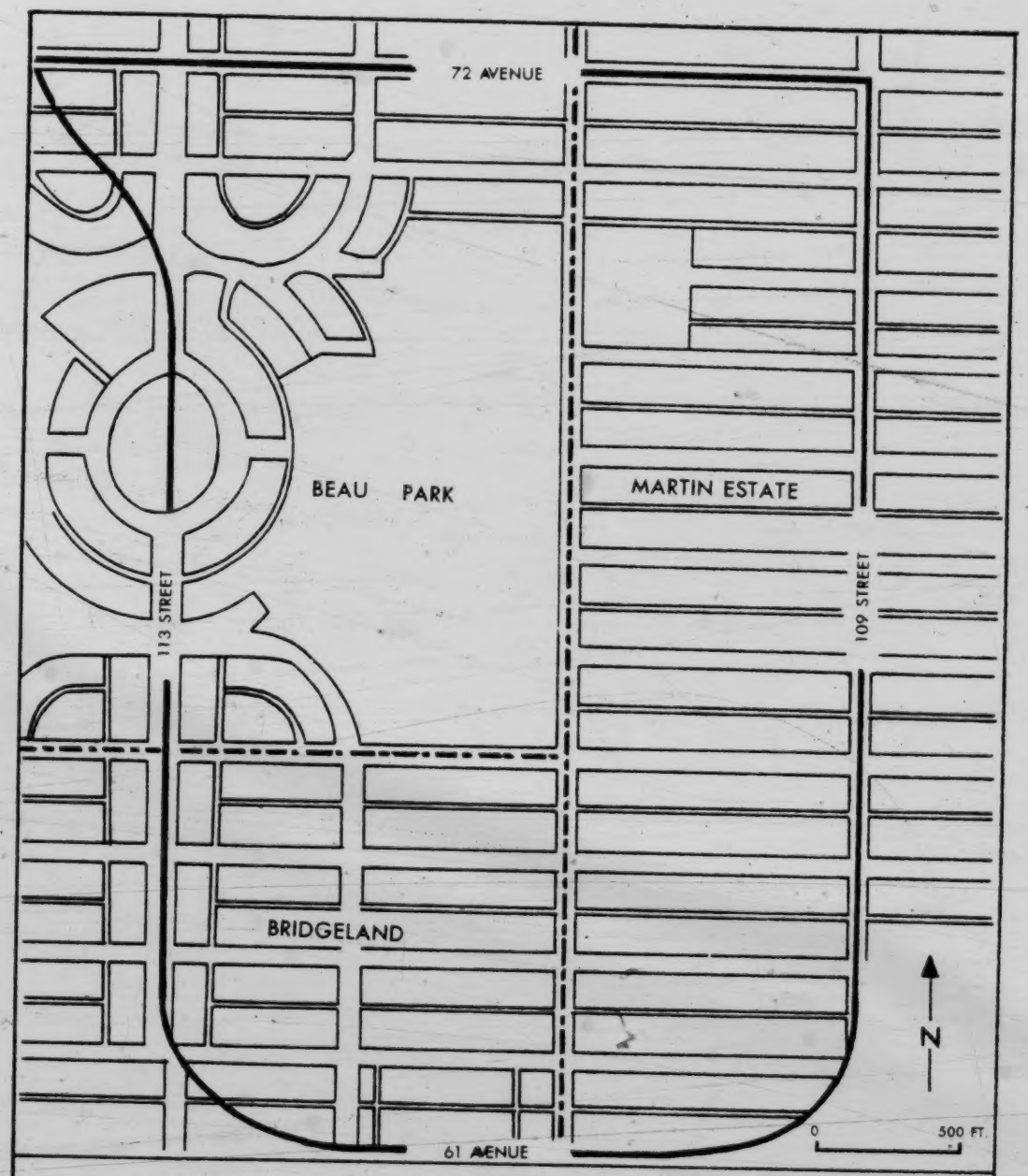

FIGURE 4

ORIGINAL PLAN OF PARKALLEN

——— EXISTING PARKALLEN BOUNDARY

— — — SUBDEVISION BOUNDARIES, 1923

Source: City of Edmonton, Planning Department

been built upon. The rest of the area was under cultivation.

The Parkallen site was resurveyed in 1949 and a new plan was prepared. The city owned a substantial portion of the land and together with Aldritt Construction Company, accounted for well over 60 per cent of the land affected by the replotting scheme.[23] In December 1950, City Council authorized the cancellation of the former subdivision plan and the newly subdivided scheme was subsequently approved on January 29, 1951 (Figure 5 and Plate 1).

A comparison of the design features of the old and new subdivision plans for Parkallen shows some differences in terms of appearance, convenience, safety, and economy.

First, the old subdivision plan had no clearly identifiable unit boundaries; it was merely an extension of that which already existed. There was nothing that would enable residents and the public in general to see the limits of the neighbourhood and visualize it as a distinct entity. On the other hand, the new subdivision plan has distinct boundaries: the four arterials; 109th and 113th Streets and 61st and 72nd Avenues.

Second, in the new plan, neighbourhood facilities such as an elementary school, parks, a church, and local shops were provided within reasonable walking distance of every

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[23] City of Edmonton, Council Minutes, December 4, 1950.

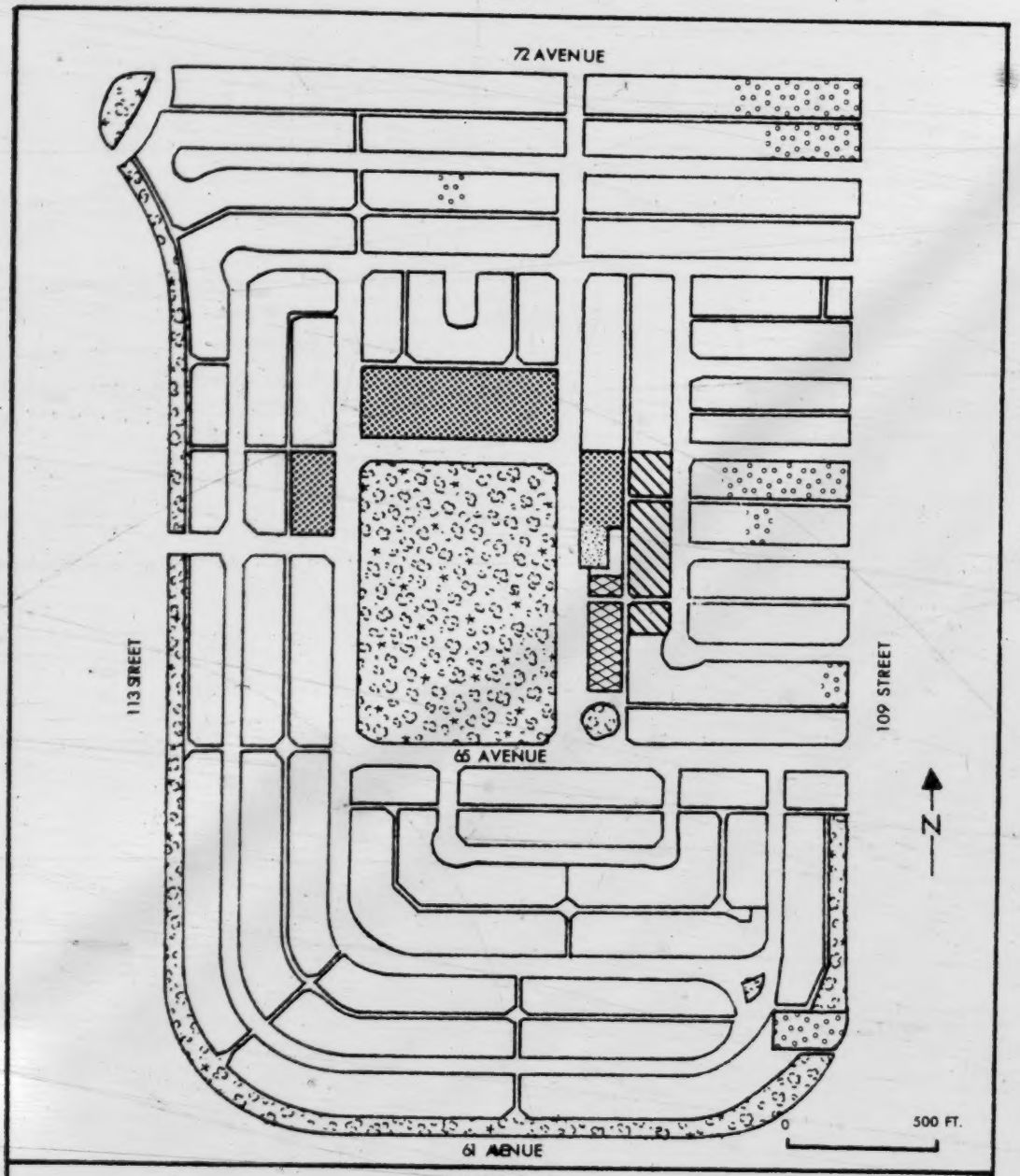

FIGURE 5

NEW PLAN OF PARKALLEN

WALKUP APARTMENTS
SINGLE FAMILY HOUSING
DUPLEXES
PARK AND SCHOOL SITE
LOCAL BUSINESS
CHURCH SITE
LOTS DEVELOPED PRIOR TO 1950

Source: City of Edmonton, Planning Department

Plate 1

Parkallen Neighbourhood Unit

Source: N. Dant, Provincial Planning Board, Province of Alberta.

resident. Also, a focus is built up around which neighbourhood residents could identify. In the old plan, some of these features were lacking. In fact, no provision was made for local shops.

Third, in the new plan, the overall density of the neighbourhood was increased with the inclusion of multi-family residential units. Parkallen, which comprises 180 acres, was planned to accommodate 3580 persons, giving it a gross density of about 18 persons per acre.[24] In the old plan, only single-family residences were provided.

Finally, in the old subdivision plan, all streets were of the same width and potential through streets, which would tend to increase both traffic and pedestrian hazards. In contrast, in the new plan, through traffic was virtually eliminated by directing it around the perimeter of the area on specifically designed roadways. This would allow non-local traffic to bypass the neighbourhood at maximum designed speeds with little interference from local traffic. Main points of access to and from the area were reduced and the effect of heavy traffic was buffered with the planting of a green strip around well over half of the neighbourhood's perimeter.

The foregoing comparisons have outlined some of the advantages of the new plan over the old plan for the

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[24] W. Chan, p. 79.

Parkallen neighbourhood. However, there were imperfections within the new plan, the most significant being the limited number of entrances and exits to and from the neighbourhood. It must be pointed out though that Parkallen was a first attempt at applying nieghbourhood unit principles. It would be more accurate therefore to consider Parkallen as being a modified grid pattern of subdivision, since a portion of the area had already been developed prior to 1951. Existing arterials were maintained wherever possible and all the existing avenues remained. At certain points, streets were simply closed to form horseshoe crescents. It is readily apparent then that the unit scheme could be fully applied only to new development.

Edmonton planners were aware that compromises had to be made in the design of the Parkallen neighbourhood. Consequently in subsequent neighbourhood subdivisions, wherever and whenever possible, attempts were made to improve on designs.

The Sherbrooke Neighbourhood Unit

A more sophisticated example of neighbourhood subdivision was Sherbrooke, which was adopted by Council on May 11, 1953, three years after the development of Parkallen.[25] In 1949 it was decided to develop the area on the

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[25] City of Edmonton, Council Minutes, May 11, 1953.

traditional "grid-iron" basis (Figure 6). However, this plan was cancelled on the advice of the town planner and replaced by a new scheme which incorporated many of Perry's neighbourhood unit principles (Figure 7 and Plate 2). Plate 2 shows a striking contrast between the Sherbrooke neighbourhood and the adjacent neighbourhood to the east which was developed on the traditional "grid-iron" pattern of subdivision. The new scheme, applied in 1952, indicates a number of changes from the original 1949 proposal.[26]

First, in the old scheme, there was a complete absence of parks and recreation areas. In the new scheme, sites are provided for parks, playing fields, and recreation areas.

Second, in the old scheme no church sites were provided. In the new scheme, church sites are provided in convenient locations.

Third, in the old scheme shopping areas were small and located on the perimeter instead of being central. Also, no off-street parking was provided. In the new scheme, there is a central shopping area with off-street parking provided.

Fourth, in the old scheme only one school site was provided and it was not centrally located. In the new

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26 E. Beecroft, "Let Us Make Our Cities More Efficient" in R. G. Putnam, F. J. Taylor and P. G. Kettle (eds.), A Geography of Urban Places, Methuen, Toronto, 1970, pp. 449-452.

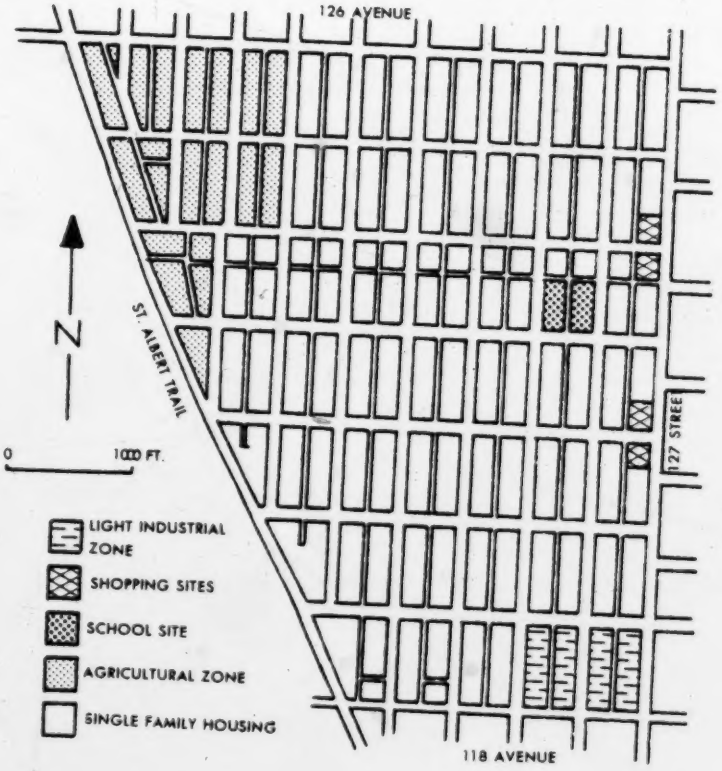

FIGURE 6

ORIGINAL PLAN OF SHERBROOKE

Source: City of Edmonton, Planning Department

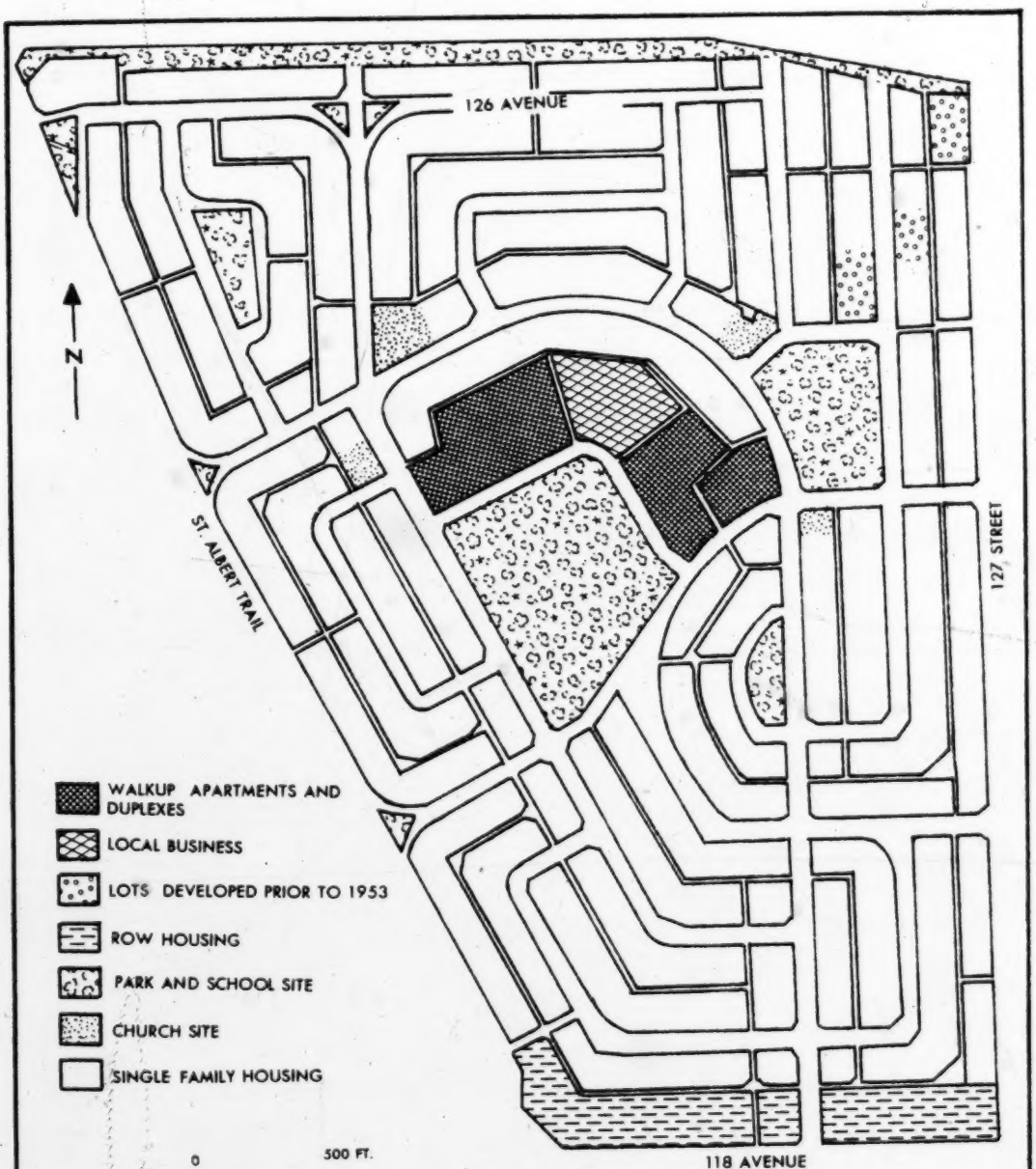

FIGURE 7

NEW PLAN OF SHERBROOKE

Source: City of Edmonton, Planning Department

Plate 2

Sherbrooke Neighbourhood Unit

Source: N. Dant, Provincial Planning Board, Province of Alberta.

scheme, two school sites are provided, reasonably accessible from all parts of the neighbourhood. The catholic school is off-center because it was designed to serve adjacent neighbourhoods as well.

Fifth, in the old scheme, all roads were of equal width and were potential "through" streets. In the new scheme, through arterial highways of adequate width are separated from local service roads by limited access planted strips. Thus both local and through traffic are safeguarded. There are feeder roads for bus routes and local residential streets are designed in such a way as to discourage through driving, yet remain adequate for local purposes. Also, at the corners of the area, there are intersections designed to keep through traffic moving.

Sixth, in the old scheme there was no variety in the types of residential zones. There were some very long and narrow house lots which are uneconomical, while others were poorly angled. In the new scheme, single-family housing was created in an aesthetic as well as a functional setting. Setbacks were arranged to allow for a rhythmic variation and a buffer strip separated housing from an adjacent industrial zone. There were also apartments and row housing in a variety of types.

In the old scheme there was an unnecessary duplication of utility lanes in some places. Also there were variations in the width of the main road. Half-jogs in the roads in

some places are unsafe, and there were some dangerous junctions. In the old scheme, the light industrial zone indicated has no place in a residential area. Likewise the agricultural zone appeared out of place, especially with houses allowed in it in excess of a ratio appropriate to such a zone.

Finally, in the new scheme, a neighbourhood focus of larger buildings and open space was included as an essential ingredient of a well-designed residential area.

As in Parkallen, the new plan for Sherbrook increased the overall density of the neighbourhood with the inclusion of multi-family residential units. Sherbrooke, which comprises 222 acres, was planned in the new scheme to accommodate 5324 persons, giving it a gross density of 24 persons per acre. The old scheme would have accommodated only 3400 persons, for a gross density of 15.4 persons per acre.

A final important factor was that in both Parkallen and Sherbrooke, less land was required for streets, so that all community services could be included without reducing the number of lots for housing.

A Comparison Between the Parkallen and Sherbrooke Neighbourhoods

A comparison between Parkallen and Sherbrooke does

show some improvement in terms of appearance, convenience, safety, and economy. In comparing Figures 5 and 7, it is apparent that there are many more exits and entrances to Sherbrooke than were provided in Parkallen. This is far more convenient to neighbourhood residents.

In Sherbrooke there is a considerable reduction in street lengths, unlike Parkallen where a crescent extends for approximately one-half mile. Furthermore, unlike Parkallen, in Sherbrooke some of the higher density traffic generating structures are diverted to the neighbourhood's periphery, as indicated by the stretch of row housing backing on 118th Avenue. If these were to be located in the neighbourhood centre, a substantial amount of traffic would converge on the central area, creating congestion and unsafe conditions. Also, in Sherbrooke a greater variety of dwelling types were allowed for than in Parkallen providing more choices for potential residents.

In Sherbrooke there are more local parks and tot lots, affording better quality residential amenities, as well as being more accessible to children who can reach these facilities without necessarily having to cross busy roadways, as is the case in Parkallen.

One inconsistency in both Parkallen and Sherbrooke schemes was the allocation of a shopping district in the centre of the unit. This was in contrast to Perry's notion of locating commercial facilities at the periphery

of the neighbourhood along an arterial route, for both the welfare of the residents and the intrinsic interests of business. In Sherbrooke, this site was subsequently re-zoned in 1952 for high density residential development.[27] The shopping centre was actually built at the corner of 118th Avenue and St. Albert Trail.

GENERAL NEIGHBOURHOOD DESIGNS

Both Parkallen and Sherbrooke illustrate how Perry's principles were incorporated into the design of Edmonton's neighbourhood units. Though the principles applied were similar to all of them, they were not built on a stereo-typed pattern.

Size

The size of each neighbourhood unit varied, being especially influenced by the pattern of existing through streets, and by such barriers as industries, railroads and ravines. According to the town planner, the ideal neighbourhood unit for Edmonton would be: "between half a mile to one mile across and having a population of from 3,000 to 4,000 people, for within this area and serving this population an elementary school can serve best and most

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[27] City of Edmonton, Council Minutes, March 13, 1962.

economically."[28] This size also supports Perry's notion that no housewife should have to walk more than one-half mile to a grocery store and no child more than one-half mile to an elementary school. He advised that the size of a neighbourhood unit should coincide with the drawing area of an elementary school and should have a population ranging from 3,000 to 6,000 and an area no greater than 200 acres.[29] Consequently, in Edmonton, wherever possible, a population target of between three and four thousand people was aimed at for each neighbourhood unit.

Parks, Playgrounds and Schools

Perry pointed out that no hard and fast rule could be laid down as to the amount of land that should be set aside for parks, playgrounds and schools.[30] After studying several neighbourhood examples he concluded that 10 per cent was "a good figure to aim at."[31]

In Edmonton, there was a public elementary school located at the approximate centre of each neighbourhood unit. Separate elementary schools were not in as great a

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[28] N. Dant, The Function, Integration of Land Use, Buildings and Design of Urban Community Centres, Report prepared for the Bylaws Committee of Council, City of Edmonton, January 4, 1951, p. 3.

[29] Perry, p. 53

[30] Ibid., p. 59.

[31] Ibid.

demand and were therefore located at the district level alongside the public junior high school.[32] Chan pointed out, "each elementary school was allotted 4 to 5 acres of playing ground and after school hours these playing fields were made available for public use. In addition to the open spaces allocated to each school, four more acres were set aside in each neighbourhood unit for parks and recreational use."[33]

Commercial Businesses

Small shopping centres, ranging from six to twelve stores, were located within each neighbourhood unit. For the convenience of the maximum number of housewives, the shops were originally located in the centre of the neighbourhood unit. However this proved to be economically impractical, since having the shops in the centre limited the number of clientele, so that businesses could hardly profit. This had caused some shops in both Dovercourt and Parkallen to close down. The development of regional shopping centres in the 1960s also likely had an influence by drawing customers away from the local shops.

Secondly, placing the business core in the centre

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[32] Four to five neighbourhoods normally constituted a district.

[33] Chan, p. 84.

would tend to draw much traffic through the neighbourhood unit into the central area. Hence, in later neighbourhood units, business areas were located at neighbourhood entrances, along arterial streets. This was in keeping with Perry's notion that businesses should be located at the periphery of the neighbourhood unit along arterial roadways.

In keeping with the objectives of the evolving General Plan, there were to be three levels of businesses: the local, district, and central downtown. District shopping centres serving several neighbourhood units were built at strategic locations. For example, Westmount and Bonnie Doon Shopping Centres were built to serve several neighbourhood units.

Street System

Perry emphasized that a neighbourhood unit should be bounded on all sides by arterial streets. In addition to improving the safety of the streets within the neighbourhood unit, it enables the residents and the public in general to see the physical limits of the community and to visualize it as a distinct identity. "Like a fence around a lot, they (arterials) heighten the motive for local improvement by defining the area of responsibility."[34] In

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[34] Perry, p. 57.

Edmonton, each neighbourhood unit was bounded by arterial streets, defining its limits.

In addition, every neighbourhood unit was provided with a special street system with each street proportioned to its probable traffic load. Once again, in keeping with Perry's maxim, the street network as a whole was designed to facilitate the circulation of traffic within the unit and to discourage its use by through traffic. Winding streets and culs-de-sac (dead-end streets with a turn-around at the end provided for cars) were used for this purpose - to discourage through traffic and thus enhance the privacy and safety of the residents.

Housing

In most of Edmonton's neighbourhood units, provision was made for a variety of accommodation to meet the needs of various family sizes and age groups. Higher density structures were at first located at the centre, near the large open spaces. This is desirable for those residing in the high density structures, since they are often deprived of private outdoor space around their dwelling unit. However, a concentration of residents in the neighbourhood centre tends to draw much traffic to the interior. Consequently, in most of the neighbourhood units developed later, the higher density dwellings were located at the

periphery, along major arterials, and fronting onto permanent open space. Hence, in many instances they also served the function of a buffer strip for single-family residences.

The plans for the development of each neighbourhood unit were prepared by the City's planning department, which incorporated in them the following land use classification: one-family dwelling units or low-density districts, two-family dwelling units or medium-density districts, multi-family dwelling units or high-density districts, local business district, sites reserved for school purposes, sites reserved for parks and recreational purposes, and sites reserved for the use of the public transportation system of the city. This was the classification which had been decided upon for the evolving general plan, and as Dale pointed out, it was obviously important that the neighbourhoods should be treated as units of the total plan.[35]

Not all the neighbourhoods in Edmonton however, were planned and developed as complete units, though the first eleven, developed between 1950 and 1953, were. They included Parkallen, Prince Rupert, Queen Mary Park, Strathearn, Belgravia, North Glenora, Idylwylde, Holyrood, Sherbrooke, Crestwood, and Woodcroft (Figure 8).

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35 Dale, p. 341.

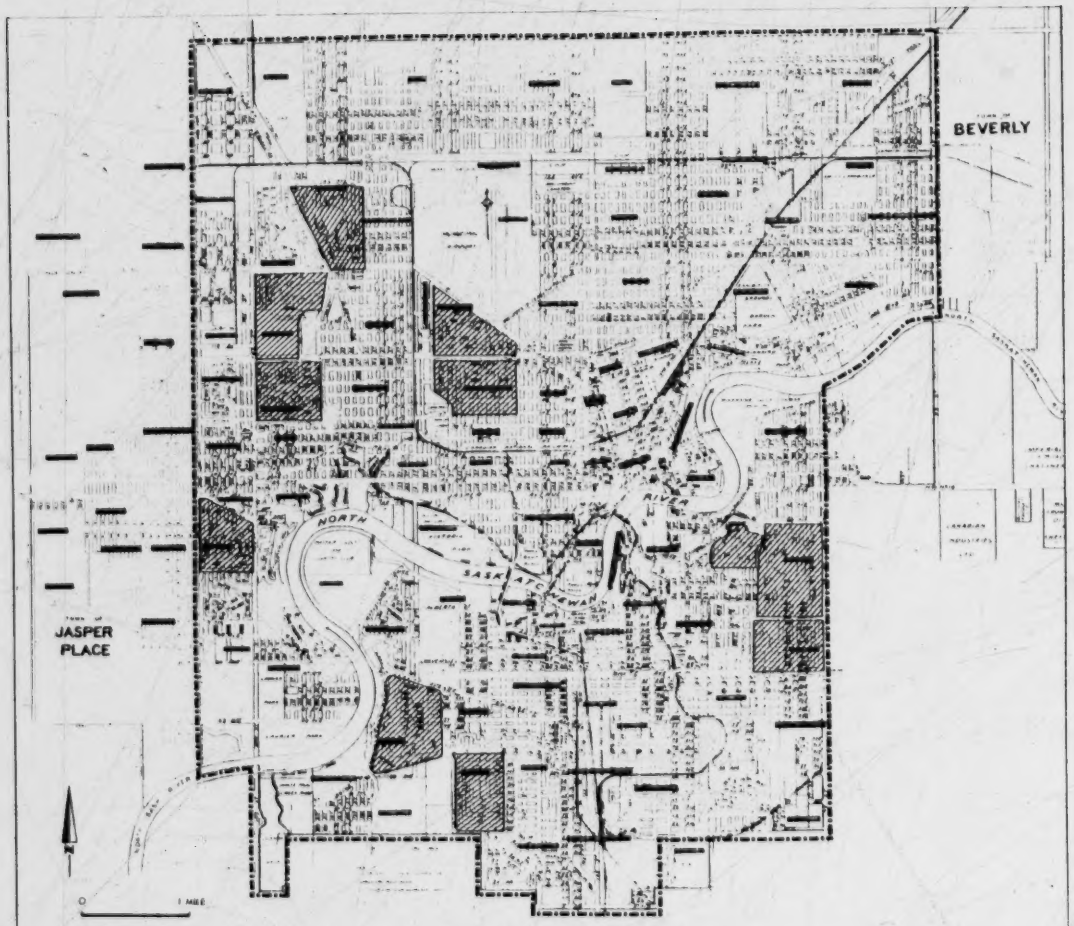

FIGURE 8

CITY BOUNDARY-1953

NEIGHBOURHOOD UNIT

NEIGHBOURHOOD UNITS-EDMONTON

1950-1953

Source City of Edmonton Planning Department

Gradually, as the supply of city-owned land was exhausted, development of complete neighbourhood units was much more difficult. Instead, applications to replot parts of neighbourhoods became more common. The inclusion of existing developed areas into new neighbourhoods was done too, as for example in the Sherbrooke and North Glenora neighbourhood units.

During the period of 1950 to 1963, there were altogether forty-one completed and four partially completed neighbourhood units developed in Edmonton. In all these neighbourhoods, the Neighbourhood Unit Concept was followed consistently in all residential development.

CONCLUSION

During this period, the city's appointment of a town planner, the establishment of a planning department with trained staff, and a Technical Planning Board (made up of heads of those civic departments most directly concerned with physical development), soon put planning in Edmonton on a sound basis. Also, this period marked a significant change in the design of Edmonton's residential areas.

A most important impetus for change came from Central Mortgage and Housing Corporation, the first to recognize the advantages of house groupings and planned unit developments. Also, facilitating design changes were the

Subdivision and Transfer Regulations and replotting schemes made possible by provincial planning legislation. Although the Subdivision Regulations were mostly devoted to such mechanical details as minimum road widths and lot sizes, they also incorporated a number of notions that were fundamental to the Neighbourhood Unit Concept. These included the compulsory dedication of land for community reserve purposes (schools and parks); maximum safety and privacy in the design of the street system; and the convenient relationships among the various neighbourhood elements.

The Subdivision Regulations also established an important planning procedure: the Technical Planning Board was made the subdivision approval authority, so that the residential planning process came very close to being self-contained within the civic administration. The land supply was effectively a municipal monopoly; the phasing of land development was under the control of the civic utilities departments; and the neighbourhoods were designed by the planning department for approval by the Technical Planning Board.

Further, under Interim Development Control, much of the city's undeveloped area was replotted. The schemes were facilitated by the city's ownership of much of the land, and by the city's application of zoning to the replotted areas. Associated with the replotting schemes was the application of neighbourhood unit principles to

residential development. These principles not only described an orderly method for the subdivision of land, but also outlined specific objectives to be aimed at in the planning of residential areas.

However, this situation changed steadily through the 1950s as the municipal land reserve was depleted and attention shifted to privately-owned land under the control of development companies. In effect, as the municipal land supply came closer to exhaustion and the emphasis in land development shifted from the public sector to the private, the city planning officials also shifted their emphasis from the details of subdivision design to schematic generalities. Intuitively, Edmonton planners felt that individual neighbourhood units could no longer be designed in isolation and that the neighbourhood was not necessarily a self-contained unit particularly in terms of commercial retailing. Hence, when the city annexed a large area of land to the southwest in 1959, a new conception of residential planning emerged, the Outline Plan Concept.

CHAPTER 2

INITIAL APPLICATION OF THE OUTLINE PLAN CONCEPT 1959 - 1967

Generally, during the 1950s, the Neighbourhood Unit Concept was closely followed as the model for residential design in Edmonton. However, in 1959 a number of changes occurred, the most significant overall change being a trend towards large scale planning and development, which can best be described as a shift from the use of neighbourhood size planning units to much larger units termed outline plan areas. The change, however, was gradual. Planners had been experimenting with larger planning units as early as 1954. This is evidenced for example by the design of the Hardisty community, which is comprised of three neighbourhood units occupying an area of some 1400 acres of land, and the Ottewell community, comprised of two neighbourhood units on 1300 acres. In this new conception of planning, public responsibility was to provide a general framework for development, along with principles and policies by which it could be implemented; the filling in of detail was a private responsibility.

This chapter begins with an examination of the general

factors which influenced the planning of residential areas during the period under review and concludes with an analysis of the change to larger scale planning units. In this regard, the aim is to discover how and why this change occurred.

Interim Development Order: 1959

In 1959 Interim Development Bylaw 1339 (Development Control Bylaw No. 1) was replaced by Interim Development Bylaw 1988 (Development Control Bylaw No. 2). According to this Bylaw, the power of the Development Officer was much restricted.[1] He was authorized only:

> to act on behalf of Council in deciding applications with respect to those parts of the General Plan or policies concerning the control of development that.....have been adopted by resolution of the Council.[2]

Under Bylaw 1988, all plans of subdivisions which were approved by Council and which were given zoning plan numbers were declared to be part of the evolving General Plan.[3] The main purpose of the Bylaw, however, along with a Planning Advisory Commission established in the same year, was to expedite completion of the General Plan and

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[1] Council, by Interim Development Bylaw 1988, appointed the Planning Director or Town Planner to be the Development Officer.

[2] Section 7e - Second Interim Development Order, June 8, 1959.

[3] City of Edmonton, Council Minutes, September 15,1959.

new Zoning Bylaw.[4] In fact, the Order put greater pressure on City Council that it was "to complete the General Plan without undue delay."[5]

Interim Development Bylaw 1988 lasted until 1965, when it was replaced by Development Control Bylaw 2624. The main purpose of this Bylaw again, was to control development until the General Plan was adopted. Augmenting this control of development was a Land Use Classification Guide adopted by Council in 1964.[6] The main purpose of the Land Use Classification Guide was to ensure that development in unzoned areas could be related to the general planning policies of the community, and to minimize the danger of unfair and inconsistent decisions on individual development applications.

Interim Development procedures required each application for development to be considered on its own merits. Permission was granted if it conformed with the evolving General Plan, an outline plan prepared by the Planning Department, and was approved by the Technical Planning Board.[7]

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[4] Bylaw 2021, A Bylaw to Establish the Planning Advisory Commission for the City of Edmonton, December 21, 1959.

[5] Ibid., Section 12.

[6] City of Edmonton, Land Use Classification Guide, August, 1964.

[7] Province of Alberta, Planning Act, 1963, Section 100, Subsection 2.

Chan points out the desirability of Interim Development Control:

> It is flexible yet restrictive; it is a breathing interval whereby the public can be gradually acquainted with the objectives and principles of the evolving General Plan; it allows the public to see how the General Plan has been evolving and it also enables them to gain some knowledge about the estimation of the cost of future development.[8]

However, she also elaborates on the dangers of prolonging Interim Development:

> Nothing is definitely fixed. There exists an element of uncertainty which only encourages the speculator but discourages the cautious developer. Of course, this raises the question of what is the ideal period of Interim Development. This depends on the size of the city, the amount of development that takes place, and, above all, the number and quality of the planning staff.[9]

Interim Development Control was viewed as a temporary measure to be in effect only until the General Plan and new Zoning Bylaw were approved. At the time of passage, it was assumed that Interim Development Control would only last a few years, but because of the city's rapid growth, work on the General Plan had slowed down.

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8 W. Chan, The Impact of the Technical Planning Board on the Morphology of Edmonton, unpublished M.A. thesis, University of Alberta, Edmonton, 1969, p. 24.

9 Ibid., p. 25.

Zoning Bylaw 2135

By the beginning of 1959, the planning authority in Edmonton was under great pressure to proceed with the General Plan and Zoning Bylaw. To quicken the realization of the General Plan and new Zoning Bylaw the Alberta Legislature, in April 1960, enacted a new clause to the Planning Act. This permitted City Council to pass a Zoning Bylaw with respect to any specific part or parts of the city, the remaining parts continuing to be under Interim Development Control until such time as further progress in the preparation of the General Plan permitted them to be made subject to the provisions of the Zoning Bylaw.[10]

Shortly after, the Planning Advisory Commission taking advantage of this change in law, proposed to prepare a draft Zoning Bylaw to cover certain parts of the city at an early date, notwithstanding the fact that the General Plan remained incomplete. The first portion of the Zoning Bylaw included the post-war residential areas planned on neighbourhood unit principles, as well as large sections of the river valley and the new industrial areas. It was envisaged at the time that little change should take place here during the twenty year period of the General Plan. Finally, in October 1961, the new Zoning Bylaw 2135 was

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[10] Province of Alberta, Planning Act, 1960, Section 80, Subsection 2a.

passed.[11] A map appended to the bylaw outlined the districts covered by it, as shown on Figure 9.

The primary purpose of the Bylaw was to control the planned and developed residential and industrial districts of the post-World War II period. These districts occupied some 35% of the area of the city in 1961.[12] In those parts of the city built up prior to World War II, developments were to continue under Interim Control and remain subject to Interim Development Bylaw 1988.

One year after the adoption of Bylaw 2135 in October 1962, Council similarly passed Bylaw 2272, which was a substantial amendment to the former Bylaw. By this amendment, a considerable amount of land was brought under zoning control: the older residential areas, areas adopted under replotting procedures since the introduction of the Zoning Bylaw, and areas that had been recently annexed to the city in the northeast and southwest, as shown on Figure 9. Certain new use districts were created to cover the extended zoning. With Bylaw 2272, about 83% of the city was brought under zoning control.[13]

The areas that were not covered by zoning in 1964

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[11] City of Edmonton, Zoning Bylaw No. 2135, Edmonton, October 2, 1961.

[12] City of Edmonton, Land Use Classification Guide, August, 1964, p. 1.

[13] Chan, 1969, pp. 120-121.

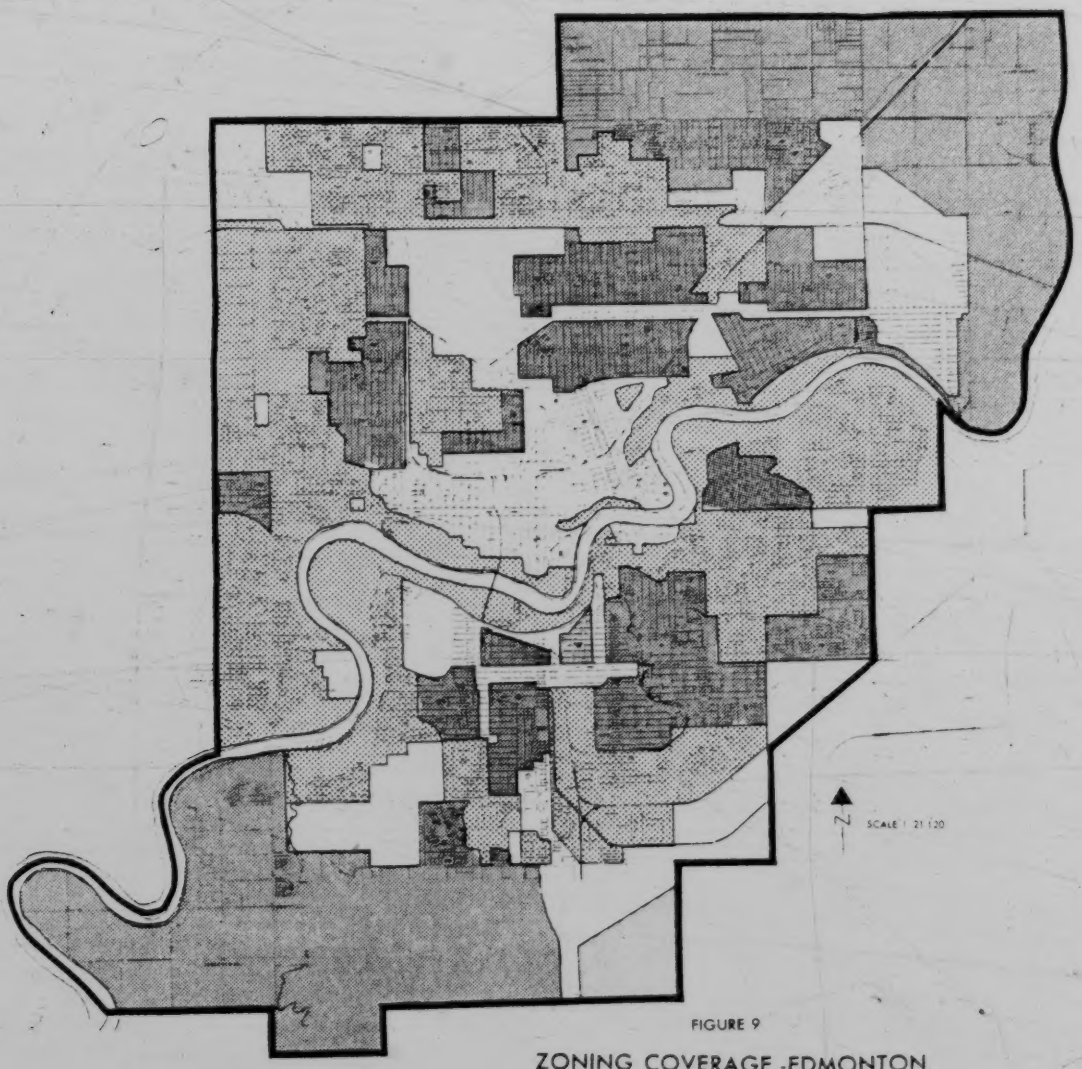

FIGURE 9

ZONING COVERAGE - EDMONTON

1961-1962

COVERAGE - 1961

EXTENDED COVERAGE 1962.

CITY BOUNDARY-1962

Source: City of Edmonton Planning Department

were the downtown area; the major apartment districts; the linear commercial development along Whyte Avenue, 111th and 118th Avenues and 124th Street; the Municipal Airport; and the annexed areas of Beverly, Jasper Place and Strathcona.[14] These unzoned areas came under the control of the Development Control Bylaw 2624 passed in 1965. Thus, while some 83% of the city was controlled by Zoning Bylaw 2135, the remainder came under control of Development Control Bylaw 2624.

The technicalities of the Zoning Bylaw were laid out to assure:

> a degree of certainty, to preserve property values, to furnish amenities, and to promote orderly and convenient development and equitable treatment for all our citizens.[15]

The Bylaw was not envisaged to be static, but was expected to be amended from time to time. Any extension of zoning coverage would be an amendment to the Bylaw. Also, amendments were viewed as necessary to suit the needs of the growing city.

Basically, a zoning bylaw divides a municipality into land use districts and prescribes the uses permitted as a right in each district or zone. Its chief strength is the protection of established land use patterns, but, it tends

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[14] City of Edmonton, Council Minutes, January 27, 1964.

[15] Planning Advisory Commission, Report No. 4, May, 1960.

to ignore the processes of growth and change.

Municipal Planning Commission

A further change which requires mention was the renaming of the Technical Planning Board to the Municipal Planning Commission as required by revisions to the Planning Act, in 1963.[16] As Chan points out, "this was done mainly to suit the smaller municipalities which did not have sufficient technical personnel to form a Technical Planning Board."[17]

The Commission is the Municipal Government's planning authority and is comprised of senior civic administrators. It acts as a regulatory body concerned with achieving orderly and economic development within the city. Its primary functions are that of a subdivision approving authority and advisor to City Council on amendments to the Zoning Bylaw and Land Use Classification Guide. Furthermore, the Commission functions as an advisor to the Edmonton Regional Planning Commission on proposed subdivisions adjacent to the city boundaries.

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[16] Bylaw 2147, The Edmonton Municipal Planning Commission, July 22, 1963.

[17] Chan, 1969, p. 20.

Programming of Development

According to Section 63(a) of the Planning Act as amended in 1960, City Council was required to specify the sequence of future development within a specified period as part of the adoption of the evolving General Plan. The need to control the timing and sequence of development is crucial, and in recognition of this need, the Subdivision Regulations included Section 5 which states:

> No land shall be subdivided unless it may reasonably be expected to be used within a reasonable period of time for the purpose for which it is proposed to be subdivided.[18]

Section 25 of the Planning Act also contains rules prohibiting the subdivision of land. Subsection 2, part (a) prohibits land from being subdivided unless:

> the manner of subdivision does not prejudice the possibility
>
> (A) of the future further subdivision of the land, and
>
> (B) of the future convenient subdivision of the adjoining land.[19]

Chan elaborates on the need to control the timing and sequence of subdivisions and developments when she says:

> Premature subdivision can seriously restrict the freedom of the city to make changes in the proposed overall design of an area although such

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18 Subdivision Regulations, Section 5, Subsection 1.

19 Province of Alberta, Town and Rural Planning Act, Chapter 337, Revised Statutes of Alberta, 1955, Section 25, Subsection 2.

> change may be desirable at the time of actual development.[20]

She further adds:

> another danger in allowing premature subdivision that Council runs the risk of inviting pressure groups to urge the installation of municipal utility services prior to the desired time. Even if the developer is prepared to pay for the entire range of utility installation, it is still unwise to allow such development to go ahead, for there are many other general costs that have to be borne by the city, such as police, fire protection and public transportation.[21]

Recognizing the importance of having a pre-determined order for development, and with the Outline General Plan as a guide, the Planning Department in liaison with private developers, prepared a yearly development program based on the Neighbourhood Unit Concept.

Comprehensive Planning

Although programmed development had been recognized as highly desirable, it was not until 1960 that comprehensive phasing plans emerged. The chief reason for this was brought out by Mr. W. E. Ogden, the chief planner for South Edmonton in 1960:[22]

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[20] Chan, 1969, p. 98. [21] Ibid., p. 99.

[22] From 1959 to 1962, planning for the City of Edmonton was divided into two sections, the North Saskatchewan River forming the boundary between them.

> Until recently, annexations to the city have involved relatively small areas of land at any one time. However, with the impending annexation of ten sections to the southwest...this automatic form of control will disappear.[23]

Mr. Ogden continued to say that in view of the annexation explained above and, "to avoid chaos in the city's future growth, it seems essential that a program for development be adopted."[24]

The change to the use of larger planning units had its origin in part in Section 5 of the Subdivision and Transfer Regulations.[25] This granted discretion to the approving authority to require the applicant to submit an outline plan of an area larger than the land under subdivision where there was no overall plan to which the site plan of the application could be related. Once an outline plan had been approved, the applicant could then submit an application for approval of the subdivision of any part of the area covered by the outline plan.

On the basis of the forecasts of population growth and land needs, two large areas were annexed to the city. With large annexations, it was possible to plan for larger

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[23] Letter from W. E. Ogden to W. R. Brown, January 7, 1960.

[24] Ibid., p. 2.

[25] Subdivision and Transfer Regulations, Section 5, O.C. 185-60.

land units. Planning then became more comprehensive in two senses. It was possible to plan whole neighbourhood units in great detail, and to plan for an orderly sequence of development, including the extension of utilities and roadways over large areas. Neighbourhood units were designed to be self sufficient in convenience services, but at the same time, integrated with one another and with the outline plan area as a whole.

Comprehensive development also encouraged uniform standards of development. A rapid population increase led to larger planning units, but land ownership also had an important influence. Once the long-range plan was developed, it was known which areas were to be developed next. With this information, private developers bought up large areas of land in anticipation of development. Large tracts of land under fewer ownerships contributed towards more comprehensive planning as fewer difficulties were encountered in arranging for the design and servicing of the properties. This situation encouraged the use of the Outline Plan Concept, which requires a relatively large area to be treated as a planning unit.

The Southwest Annexation Area

In 1959 an area of land, comprising some 7000 acres, to the southwest of Edmonton, was annexed to the city. In

1960 the Technical Planning Board recommended to City Council that the area be developed according to the principle of 'sequential' development,[26] which was outlined by the Planning Advisory Commission in its September, 1960 report,[27] and adopted as part of the evolving General Plan.

In 1960 a tentative outline plan was prepared for the southwest area showing proposals for future neighbourhood units, their areas and probable populations, plus the alignment of major arterials, and preliminary recommendations for programming of development. The order of development as shown on Figure 10 was accepted by City Council on May 24, 1960.[28] This plan proposed the development of thirteen neighbourhoods within the next three or four years.[29] Another seven, without any chronological order, were to be developed subsequently. Their priority of development would depend on future needs. In addition, there were four neighbourhoods which could be developed any time at the discretion of the City Commissioners. Priority of development was determined on the basis of engineering and other costs and, "having regard to the considerations of

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[26] City of Edmonton, Council Minutes, September 12, 1960.

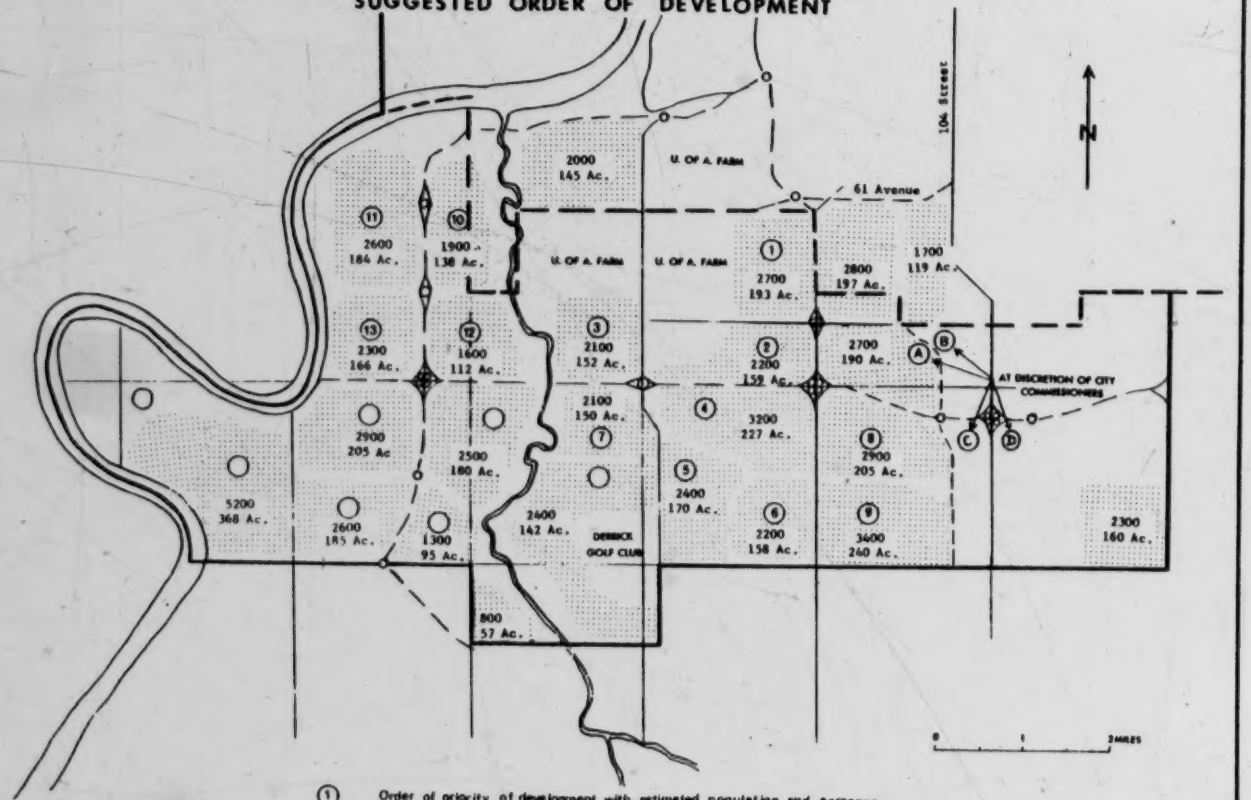
[27] City of Edmonton, Planning Advisory Commission, A Special Report Concerning Land Development, September 9, 1960.

[28] City of Edmonton, Council Minutes, May 24, 1960.

[29] City of Edmonton, Council Minutes, May 6, 1960.

FIGURE 10

POSSIBLE EXPANSION OF SOUTH-WEST AREA
SUGGESTED ORDER OF DEVELOPMENT



Order adopted by City Council May 24, 1960

Source: Planning Department, City of Edmonton

orderliness, economy and convenience," as required by the Planning Act.[30] It is evident from the program that there did exist a certain degree of flexibility within the framework.

However, because of controversy and disagreement among the various planning bodies over actual development in the southwest area, the order of development did not proceed in the manner that was originally accepted. As a result, the original 1960 order for the southwest area was disregarded and a new order was adopted as shown on Figure 11. This new order was more generalized and was more adaptable to changing circumstances.

The Northeast Annexation Area

Another large area that was annexed to the city at about the same time as the southwest area consisted of eleven sections of land in northeast Edmonton.[31] Even prior to annexation, the Planning Department had prepared a development program for these eleven sections, as well as the partially developed land to the south. This program, as shown on Figure 12, provided for twenty-five years of development. The particular needs of the

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[30] Province of Alberta, Planning Act, Section 63(a), 1960.

[31] These eleven sections were annexed on December 30, 1961.

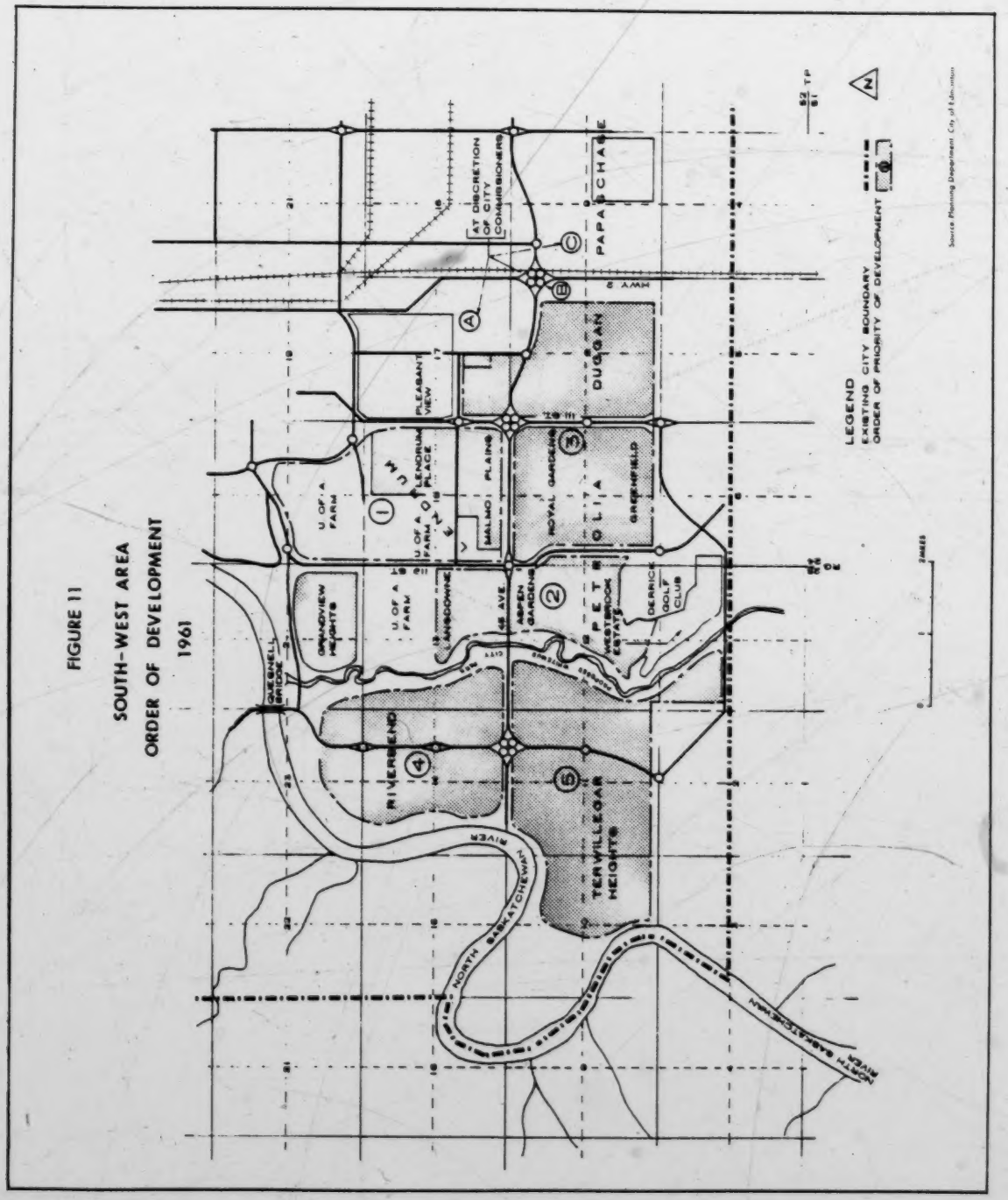

FIGURE 11

SOUTH-WEST AREA

ORDER OF DEVELOPMENT

1961

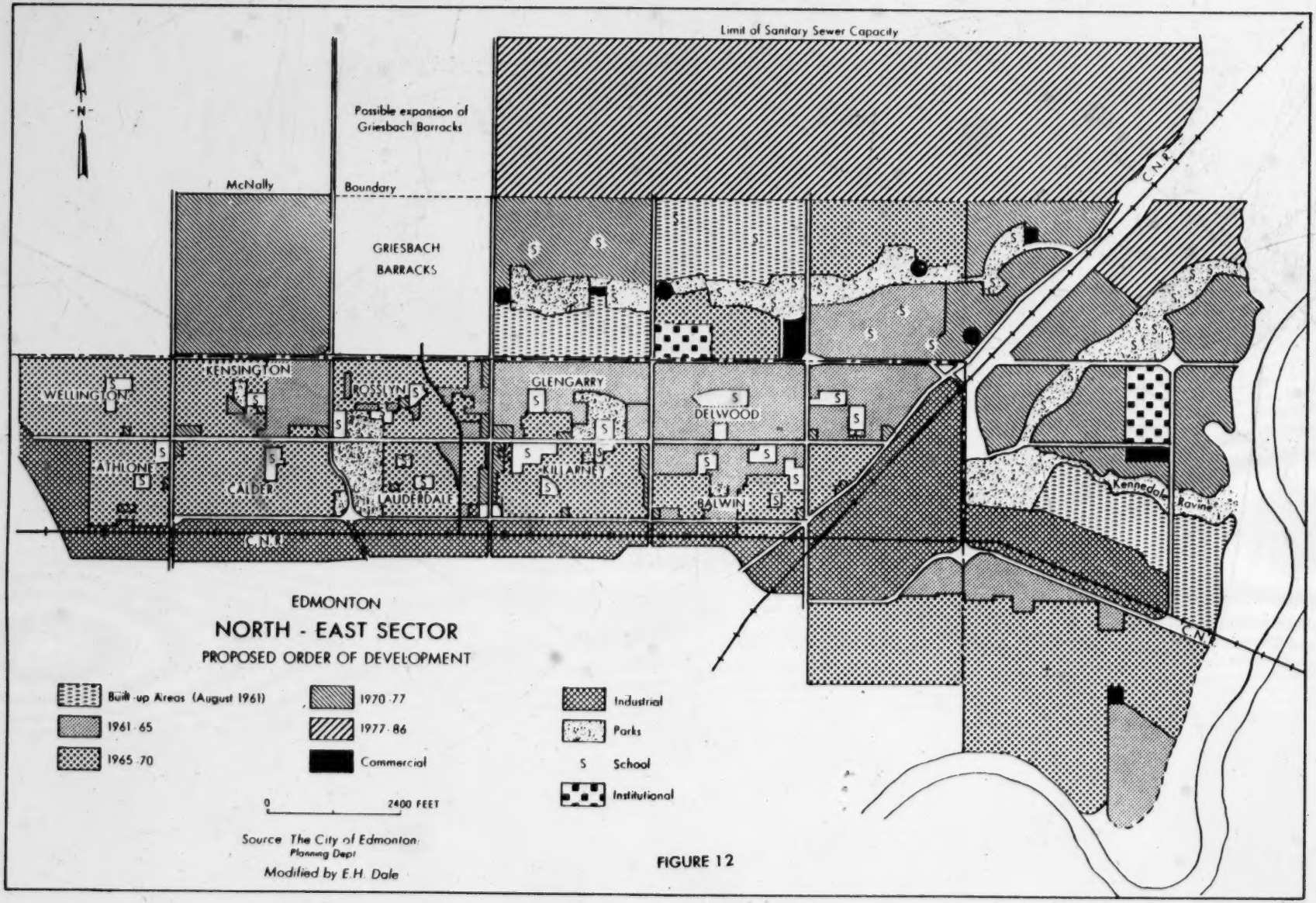
Limit of Sanitary Sewer Capacity
Possible expansion of Griesbach Barracks
McNally
Boundary
GRIESBACH BARRACKS
N
WELLINGTON
KENSINGTON
ROSSLYN
GLENGARRY
DELWOOD
ATHLONE
CALDER
LAUDERDALE
KILLARNEY
BALWIN
C.N.R.
Kennedale Ravine
EDMONTON
NORTH - EAST SECTOR
PROPOSED ORDER OF DEVELOPMENT
Built-up Areas (August 1961)
1961-65
1965-70
1970-77
1977-86
Commercial
Industrial
Parks
S School
Institutional
0
2400 FEET
Source The City of Edmonton Planning Dept
Modified by E.H. Dale

FIGURE 12

northeast area were two-fold. The first was to complete the development of the old subdivisions of Kensington, Rosslyn, Lauderdale, Glengarry, Baldwin, Belvedere, and an undeveloped area north of the then built-up area of Beverly. The second was the need for an orderly sequence of development in the new lands north of these subdivisions, that is, north of 137th Avenue.

A certain amount of flexibility was incorporated into the program. There was allowance made for change, and it was viewed essential that development be considered in conjunction with other related policies, such as the amount of Central Mortgage and Housing Corporation loans made available in any year, or changes made to the Preliminary District Plan. Consequently, it was felt desirable that the order of development be revised every three years.

The Technical Planning Board recommended the program to City Council in 1961. Council twice considered the Board's recommendation, but it was not formally adopted as part of the evolving General Plan, unlike the order for the southwest area.[32]

Despite the fact that the northeast order was only a guide, it was quite closely adhered to during the first three years following its tentative adoption. This in a way reflects the practicality of the program. The first

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[32] City of Edmonton, Council Minutes, November 27, 1961; January 8, 1962.

stage of development included the then partially completed neighbourhoods of Kensington, Rosslyn and Glengarry, developed between 1961 and 1962. Then the new Delwood neighbourhood had construction begin between 1962 and 1964, while parts of Steele Heights were developed in 1963. It is apparent from the above dates that there was a certain amount of overlap in development. This is desirable as a way of providing the public with a reasonable degree of choice.

The two programs described above are examples of conventional planning philosophy. Policies are laid down in a broad manner, with only a general framework provided. Stages of development are logically spelled out, "having regard to considerations of orderliness, economy and convenience."[33] Detailed subdivision neighbourhood designs are not considered until they are "expected to be used within a reasonable period of time."[34] Such sequential programs of development, general in framework, yet conveying a city's planning policies are an extremely important part of successful town planning.

CONCLUSION

Changes in provincial and municipal planning legislation, and a shift to larger scale planning units were

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[33] Province of Alberta, Planning Act, Section 63(a), 1960.

[34] Subdivision and Transfer Regulations, Section 16, 1960.

the major factors which influenced the development of new residential areas during the period under review. The required use of outline plans after 1960 set the trend towards larger planning units. Also, after 1963 the Municipal Planning Commission, as policy, began to require the submission of outline plans before plans of subdivision. Through experience, it was realized that small scale planning usually led to later land use conflicts.

The two programs described were examples of early versions of outline plans. During this period, an outline plan was essentially a phasing plan, prepared by the Planning Department and indicating in general terms a sequence of development for neighbourhood units within a large planning area. However, further changes were yet to come, particularly with regards to the methods of preparing outline plans and designing outline plan areas.

The two large annexations discussed provided Edmonton planners with the opportunity to engage in large scale planning. By planning neighbourhoods within much larger areas, an order could be imposed which controlled the timing and sequence of development. Further, this programming of development was based on the Neighbourhood Unit Concept, and involved a logical sequence of utility installation and a programme of roadway construction. This effectively controlled "leapfrogging" of development, which had been occurring during the early 1950s, whereby

individual neighbourhood units were planned and developed independently as the need arose in different areas of the city.

The outline plan was thus conceived to have two basic motives: to provide a general framework into which specific development proposals could be fitted; and to create a community service unit larger and more realistic than the Perry neighbourhood. The neighbourhood however did not disappear in this concept, but merely became a sub-unit of a larger entity.

Although the first versions of outline plans were drafted in the late fifties, they did not come into full being until 1967, paralleling the completion of the General Plan. Refinements had to be made, primarily to clarify procedures, which the private development industry had to follow.

CHAPTER 3

THE OUTLINE PLAN CONCEPT

1967 - 1976

Publication of the General Plan in 1967 marked the beginning of a major reorientation of residential land use planning in Edmonton. In response to changing conditions, previous policies were clarified, revised, or rejected, and new policies were adopted and sometimes improved again, at a later date.

The continuation of large scale planning and development through the use of the outline plan, and the application of a structured plan preparation process, were the major factors influencing the planning of new residential areas during the planning period under review. Along with major changes in residential design, the role of the outline plan became more clearly defined; it was no longer viewed solely as a phasing plan.

This chapter begins with a discussion of the General Plan, followed by a description and explanation of the Outline Plan Concept. It continues with a description of the general residential design process and concludes with an analysis of goals and objectives for outline plan areas.

General Plan

Although work on a General Plan began with the appointment of Professors Bland and Spence-Sales in 1949, the city since that time had been growing so rapidly, and the Planning Department had such a small staff, that there was little time for anything but routine development control. Long range planning was forced into the background.

To facilitate progress on the General Plan, the city adopted two measures. First, the Planning Department reinforced its planning staff. A separate planning and research section was created in 1959 to work exclusively on the General Plan.[1] Second, taking advantage of Section 89 of the 1953 Planning Act, City Council, through Bylaw 2021, established a three-man Planning Advisory Commission in December, 1959. This lay body was intended to advise and assist City Council with regard to planning the orderly development of the city and, in particular, to be responsible for the preparation of a General Plan.

In retrospect it does seem that the creation of the Planning Advisory Commission was a wise move, for in less than three years much of the General Plan was "either complete, well-advanced, or so well underway that its

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[1] City of Edmonton, Planning Department, Annual Report, 1959-1960.

completion is assured."[2] The General Plan was subsequently completed in August, 1967, but it was not adopted by City Council until May 18, 1971. Policy changes in the interim, and changing development trends, forced amendments to be made to the original publication.

Adoption of the General Plan was a major step, since it required the establishment and clarification of planning principles to guide the large growth which was predicted for the city. The principle of particular importance to residential development was the adoption of the Outline Plan Concept. As stated in the General Plan, "these plans are most important in ensuring that the policies of the General Plan are properly utilized in the preparation of planning studies for growth areas of the city and hence are an important means of implementing the General Plan."[4]

However, the General Plan did not specify the relationship of an outline plan to other types of plans, nor did it specify its place in the planning process. Furthermore, the General Plan did not establish principles that could be specifically applied in the design of outline plan areas. Hence, its usefulness as a guide to outline planning

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[2] Letter from the Planning Advisory Commission to the Mayor and Council, City of Edmonton, July 18, 1963, p. 2.

[3] City of Edmonton, Bylaw 3279, General Plan, August, 1967.

[4] Ibid., p. 17.4.

was severely limited.

Purpose of an Outline Plan

Residential planning in Edmonton from 1967 to the close of this thesis has been based on a hierarchy of plans from the largest most schematic outline plan, to the most detailed plan of subdivision. An outline plan as provided for under the Subdivision and Transfer Regulations,[5] and as defined in the General Plan, is, "a broad land use and transportation plan which establishes the distribution of major uses throughout an area, with the fundamental objective of providing a framework upon which detailed subdivision may be based."[6]

An outline plan represents a statement of planning principles in conjunction with a general overall framework of public and private uses, all intended to apply over a relatively long period. Such a plan thus ensures that major uses such as schools, shopping centres, and arterial roadways are located in an orderly and economic manner, and in a manner consistent with the needs of the neighbourhoods, district, and city. At the same time, urban development objectives are established.

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5 Province of Alberta, Subdivision and Transfer Regulations, O.C. 1019/67, Section 5.

6 General Plan, 1967, p. 17.4.

Outline Plan Areas

Outline plans have been prepared for six large areas where new residential growth was expected to occur (Figure 13). These areas include: West Jasper Place (1967), in West Edmonton; Riverbend-Terwillegar Heights (1969), in Southwest Edmonton; the Northeast Edmonton Outline Plan Area which included plans for Hermitage (1970) Casselman-Steele Heights (1971), and Clareview (1972); Castle Downs (1973), in North Central Edmonton; and Kaskitayo (1974), in South Central Edmonton.[7]

Not all outline plan areas, however, were on the same scale. For example, Kaskitayo, one of the smaller outline plan areas, occupies an area of approximately 2400 acres and will support a projected population of some 53,000 people.[8] In comparison, Mill Woods, one of the larger outline plan areas, occupies approximately 6000 acres of land and will support a projected population of some 120,000 people.[9]

Also, not all outline plans were prepared by the City Planning Department. Those that were included Mill Woods,[10]

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[7] Date in brackets signifies the year outline plan was prepared.

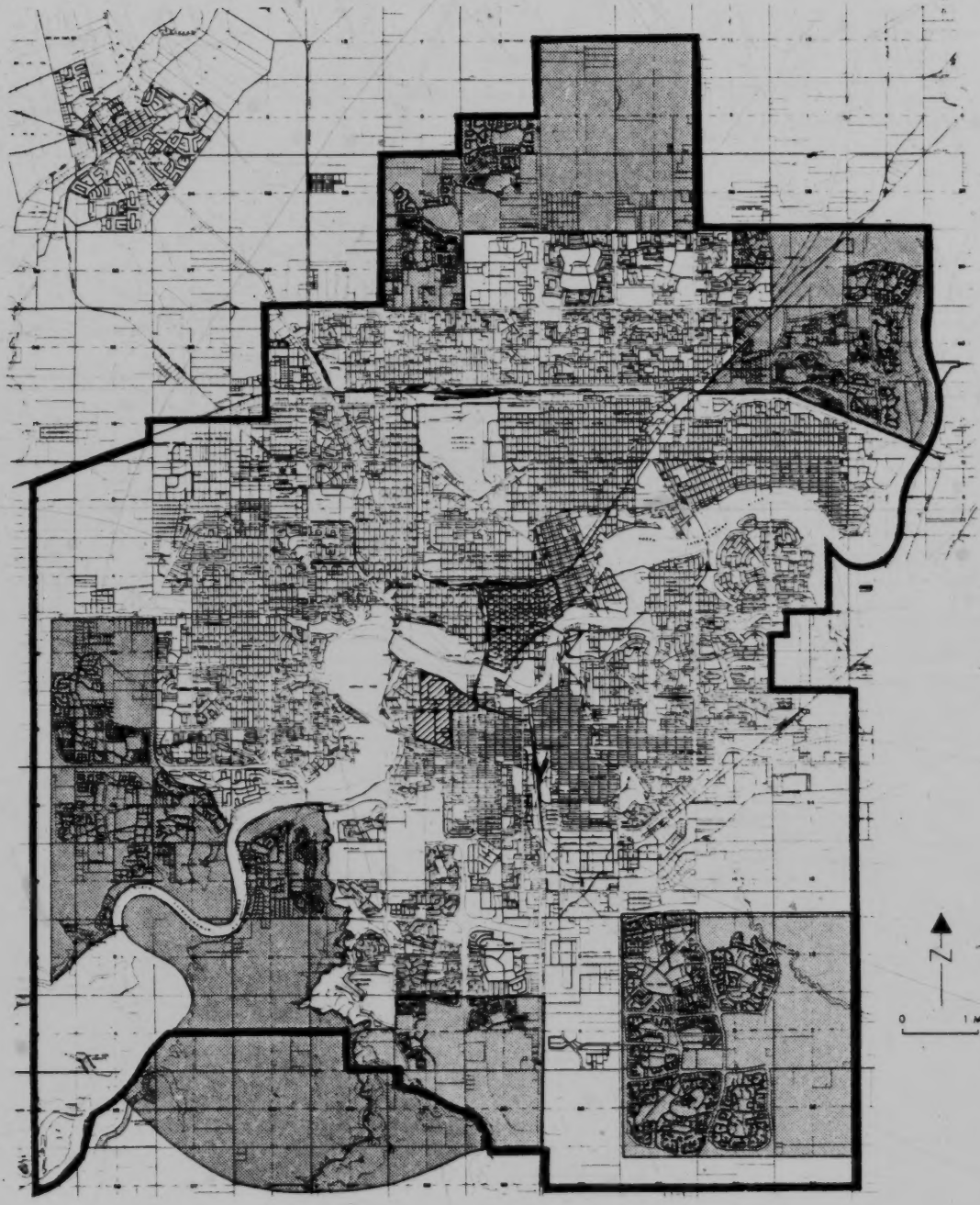
[8] Underwood, McLellan and Associates, Kaskitayo Outline Plan, May, 1974.

[9] City of Edmonton, Planning Department, Mill Woods, March, 1971.

[10] Ibid.

FIGURE 13

OUTLINE PLAN AREAS



OUTLINE PLAN AREA

CITY CORE AREA

UNIVERSITY AREA

CITY BOUNDARY-1976

Source: City of Edmonton, Planning Department

Casselman-Steele Heights,[11] and Riverbend-Terwillegar Heights.[12] The others were prepared by private consultants. For those prepared by the private sector, the Planning Department provided preliminary reports which outlined the city's expectations and requirements for development within the outline plan area.[13] These preliminary reports were necessary since the General Plan did not provide sufficient guidance.

Furthermore, the more recent outline plans (those prepared during the early 1970s) indicate some changes from the earlier versions (those prepared during the late 1960s). For example, in the more recent outline plans provision is made for greater variety in housing types, including more multiple family housing, which has increased densities in these areas.[14] Also, provision was made for public housing and it became city policy that public housing be made

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[11] City of Edmonton, Planning Department, Casselman-Steele Heights District Outline Plan, July, 1971.

[12] City of Edmonton, Planning Department, Riverbend-Terwillegar Heights Outline Plan, 1969.

[13] See for example: City of Edmonton, Planning Department, North-East Edmonton Outline Plan Study, Survey and Analysis Report, 1969 and Kaskitayo Outline Plan, Development Policies and Guidelines Report, August, 1970.

[14] For example, the 1967 plan for West Jasper Place suggested a gross density of 19 persons per acre. In comparison, the 1974 plan for Kaskitayo suggested a gross density of 22 persons per acre. The West Jasper Place plan was subsequently amended in 1972 and the density increased to 23.4 persons per gross acre.

available for 5 per cent of the projected population of the subdivision in all new areas.[15] Mobile home developments were considered for integration into outline plan aaeas, as well.[16] This change to a greater mix of housing types was a reflection of rising land and housing costs in new suburban areas and was meant to provide an affordable alternative to the single-detached dwelling.

Another important change that occurred after 1970 was the inclusion of the Neighbourhood Outline Plan in the plan preparation process.[17] This represented an intermediate stage between the outline plan and the detailed plan of subdivision.[18] The Mill Woods plan went even further, and included a development concept which represented an additional stage in the plan preparation process.[19] The development concept, more general in nature, preceded the outline plan, and its purpose was to set out the planning philosophies, and goals and objectives for the development of the area. For example, one of the more important social

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15 City of Edmonton, Council Minutes, May 10, 1971.

16 City of Edmonton, Council Minutes, October 25,1971.

17 City of Edmonton, Municipal Planning Commission Minutes, April 6, 1972.

18 City of Edmonton, Planning Department, Terms of Reference for Neighbourhood Outline Plans, Working Paper, 1972.

19 City of Edmonton, Planning Department, Mill Woods, March, 1971.

objectives of the development concept was to encourage citizen participation in the evaluation and modification of planning recommendations for the area. The plan did not clearly outline how, and in what form, this participation would be implemented into the planning process, but it was the only outline plan which even mentioned a very important step in the planning process - the step of monitoring and reviewing the successes and failures of the plan after implementation.[20]

Outline Plan Process

As previously stated, the purpose of an outline plan is to provide a means by which public requirements for co-ordinated development may be set out to provide developers and land owners with a clear indication of city requirements before proceeding, in association with the Planning Department, with the preparation of more detailed proposals. This is to ensure that development proceeds in an orderly and economical manner. The plan preparation process therefore involves a three-step sequence:[21]

1. The District Outline Plan - a highly schematic plan for an area or a large part of an area. It

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[20] Ibid.

[21] City of Edmonton, Planning Department, Planning Process in Residential Outline Plan Areas, November 23, 1977.

may be prepared by either the city planning department[22] or private consultants,[23] and sets out the generalized land use and circulation systems with particular emphasis on those features of suburban development that are public responsibility, such as schools, parks and through streets. It also indicates neighbourhood boundaries and any major internal and external influences on the area. Further, the plan must be accompanied by a report document outlining planning objectives as well as projected population totals and densities. This plan must be approved by City Council. (Figure 14)

2. The Neighbourhood Outline Plan - describes in greater detail the location of all roadways and walkways, the elementary school-park site, commercial uses, and the location and mix of housing units, including any public housing component. This plan must conform to the District Outline Plan and may be prepared by either the city planning department or private consultants and is approved by the Municipal Planning Commission. (Figure 15)

3. The Subdivision Plan - the final detailed design stage. It includes all of the information shown on the Neighbourhood Outline Plan as well as lot boundaries, lot and block numbers and street names and numbers. The Subdivision Plan should conform in all aspects to the Neighbourhood Outline Plan and result in the creation of individual parcels. However, in some

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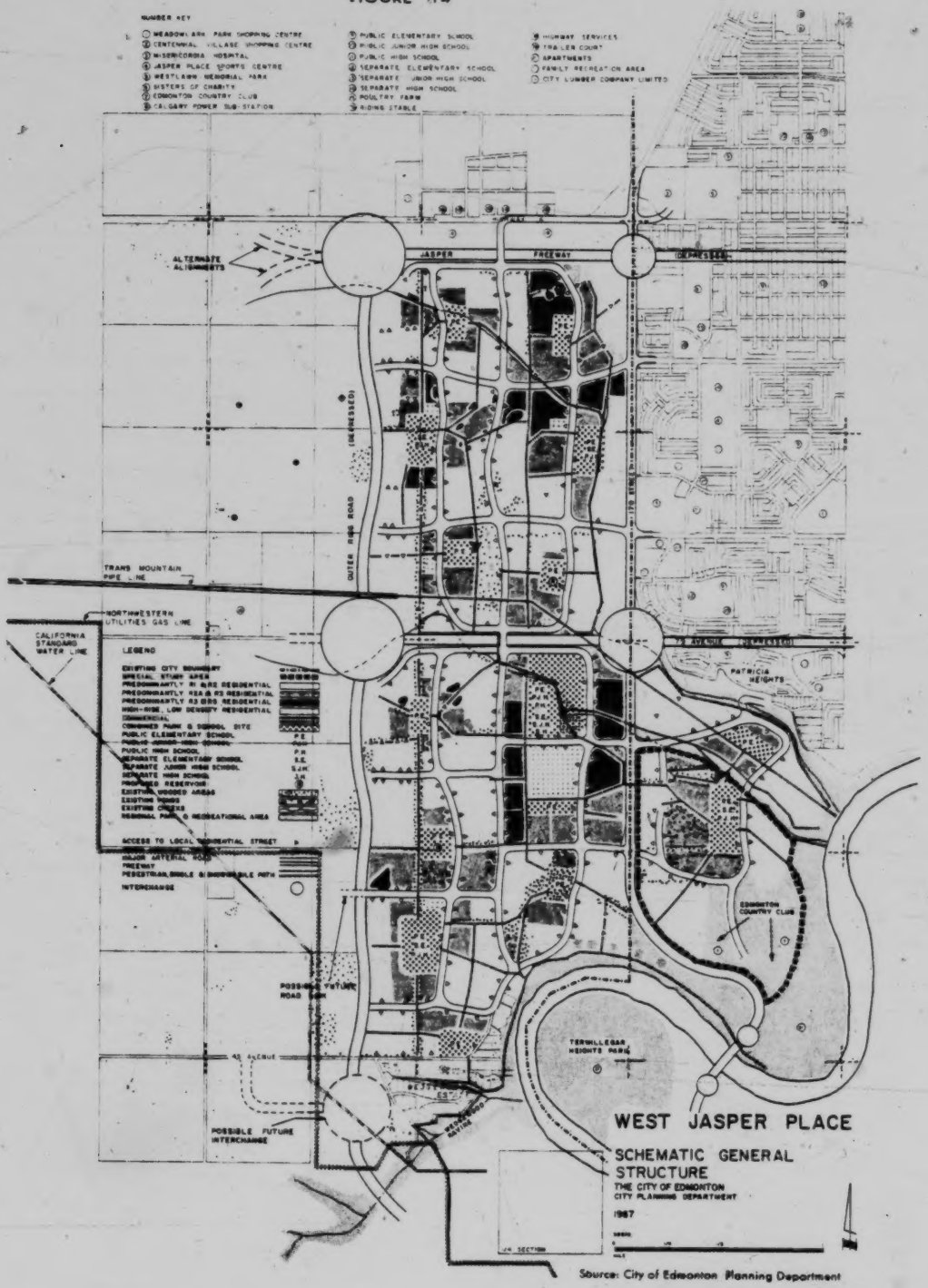
22 See for example: City of Edmonton, Planning Department, West Jasper Place, Review Area Outline Plan, 1967.

23 See for example: M. V. Jones and Associates, Clareview Outline Plan, May, 1972.

FIGURE 14



Source: City of Edmonton Planning Department

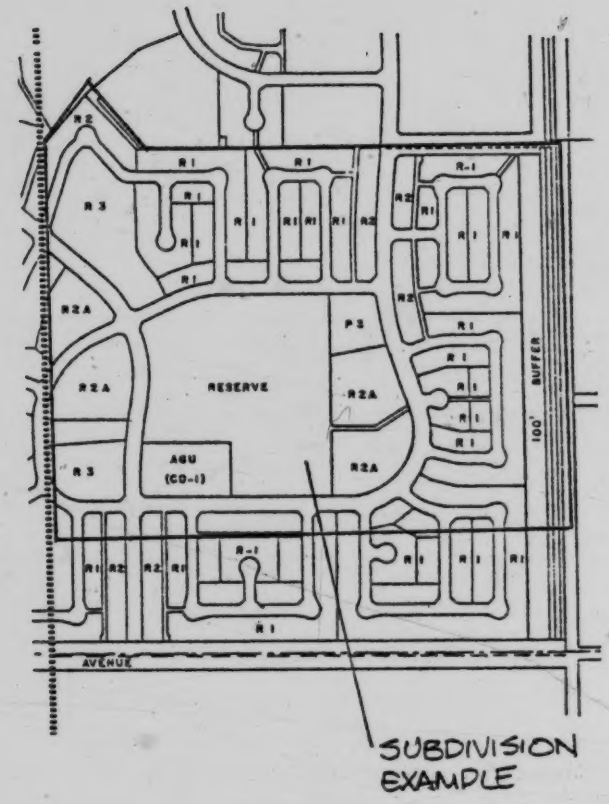


FIGURE 15

ZONING AND
PROPOSED NEIGHBORHOOD OUTLINE PLAN

NEIGHBORHOOD 4
CASTLE DOWNS

Source: City of Edmonton, Planning Department

> cases, because of unforeseen problems and changes in housing market conditions there may be deviations between the actual subdivision and the Neighbourhood Outline Plan. The Subdivision Plan is prepared by individual land owners and approved by the Municipal Planning Commission. (Figure 16)

Once the Subdivision Plan has been approved, the land owner must make formal application for zoning changes in conformance with the approved Neighbourhood Outline Plan and the Subdivision Plan. After the zoning changes have been approved, the land owner makes application for a development and building permit.

City Council approval of District Outline Plans is always in principle, the intent being that they will act as guides to the development of an area; Council, however, retains the right to modify such plans through due process. This usually takes the form of amendments recommended by the Municipal Planning Commission as a result of reviews undertaken by the Planning Department. West Jasper Place[24] and Riverbend-Terwillegar Heights[25] are examples of this process and the original documents are now superseded by amendment reports.

In assessing the plan preparation process for

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[24] City of Edmonton, Planning Department, West Jasper Place Outline Plan Amendments, 1972.

[25] City of Edmonton, Planning Department, Riverbend-Terwillegar Heights District Outline Plan, 1977.

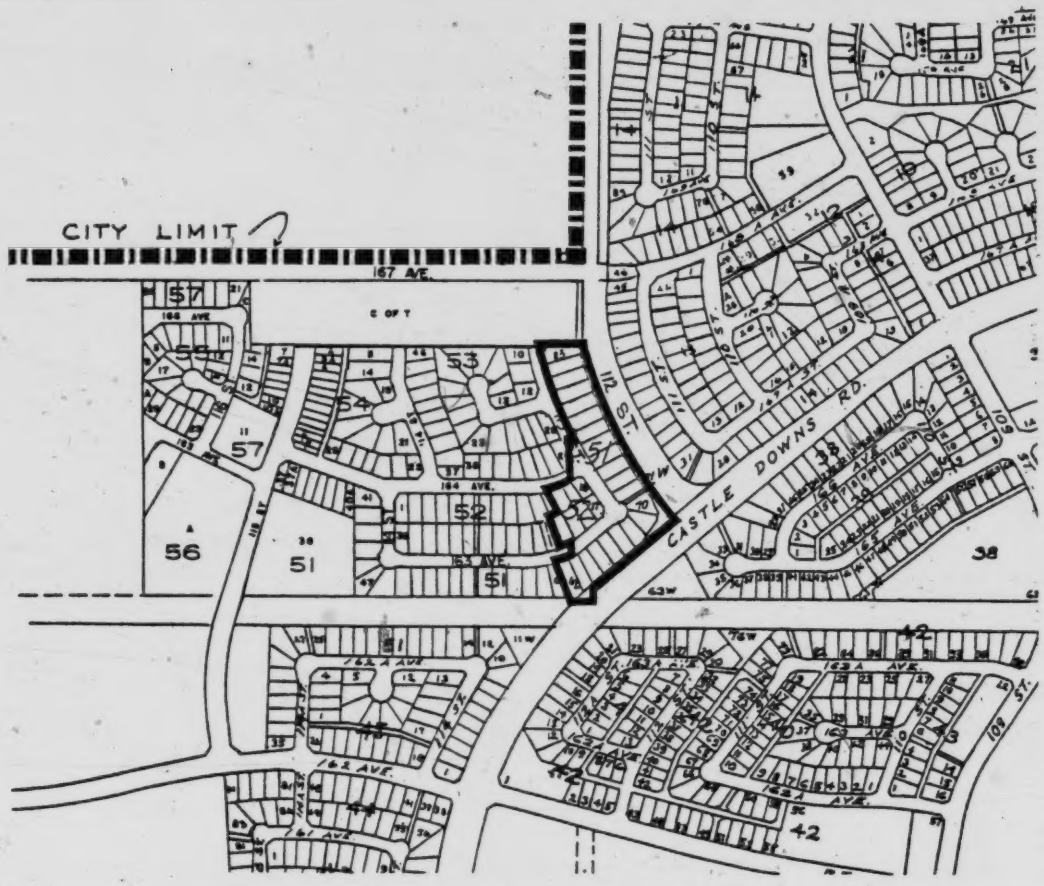

FIGURE 16

PROPOSED SUBDIVISION

Source: City of Edmonton, Planning Department

Edmonton, it would appear that an additional step should be included, between the District Outline Plan and the more detailed Neighbourhood Outline Plan. The present process does not seem to be in accordance with the basic hierarchical structure of outline plan areas, which is: the district, the community, and the neighbourhood. Since service facilities are provided at all three levels of this hierarchy, it would appear logical that plans be prepared accordingly. It is suggested therefore, that a Community Outline Plan be included in the process to be more consistent with the nature of outline plan areas. The inclusion of a Community Outline Plan would help to clarify the sequence of steps involved in progressing from the very general schematic stage to the most detailed plan of subdivision.

General Residential Design

As originally conceived by Perry, a neighbourhood unit was a small, self-contained residential area focussed not only on an elementary school, but also including other community facilities such as parks, a community centre, churches, and convenience shops, forming a neighbourhood centre. In Edmonton, by 1960, it was becoming apparent that the population that supports one elementary school was not large enough to support the principal social and

commercial services required by the rapidly increasing suburban population. A planning approach for residential areas therefore had to be conceived at a larger scale than the neighbourhood unit, so that it could embody all of the required services and at the same time reduce land use conflicts. The concept was described by Humphrey Carver, in his book Cities in the Suburbs, published in 1962.[26]

To give identity and physical shape to the suburbs, Carver suggested the development of town centres. These would include a major shopping centre as well as all of the necessary public facilities such as schools, libraries, churches, health clinics, fire and police stations, and so could function as a focal point for a group of three to four neighbourhoods.[27] "At this scale, a community is comprehensive, with a full range of age groups in the population, and a full roster of social and commercial institutions."[28]

Edmonton's outline plans reflect some of the planning principles outlined by Carver, although the scale of outline plan areas is much larger than those he suggested.[29]

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[26] H. Carver, Cities in the Suburbs, University of Toronto Press, Toronto, 1962, 120 pp.

[27] Ibid., p. 64. [28] Ibid., p. 60.

[29] Carver was describing planning areas that would support a population of 15,000 to 20,000 people. This would approximate a community in Edmonton's Outline Plan areas.

Outline plan areas are comprised of several communities. A community, with a population of 15,000 to 20,000 people is generally comprised of three or four neighbourhood units as illustrated on Figure 17. In general, each community focusses on a junior high school and possibly includes community level shopping facilities. Each community is usually delineated by arterial roadways spaced at one-mile intervals. This is based on Edmonton planners' experience with urban neighbourhood plans and subdivision traffic generation.30

Neighbourhood units, three or four to a community, usually consist of 180 to 200 gross acres as illustrated on Figure 18. The neighbourhood is organized around a neighbourhood centre comprised of educational, recreational, and community league facilities, and in some instances incorporating a convenience store. Hence, the centre of the neighbourhood is considered to be a node, in which are located all the convenience facilities which would normally be expected to serve the resident population. Each neighbourhood is usually delineated by the one-half mile spacing of collector level roadways. Populations of 4,500 to 5,000 prevail within the neighbourhoods, with all neighbourhood facilities easily accessible to all groups irrespective of

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30 City of Edmonton, Planning Department, Planning for High Density Living: A Perspective, Working Paper, November, 1976.

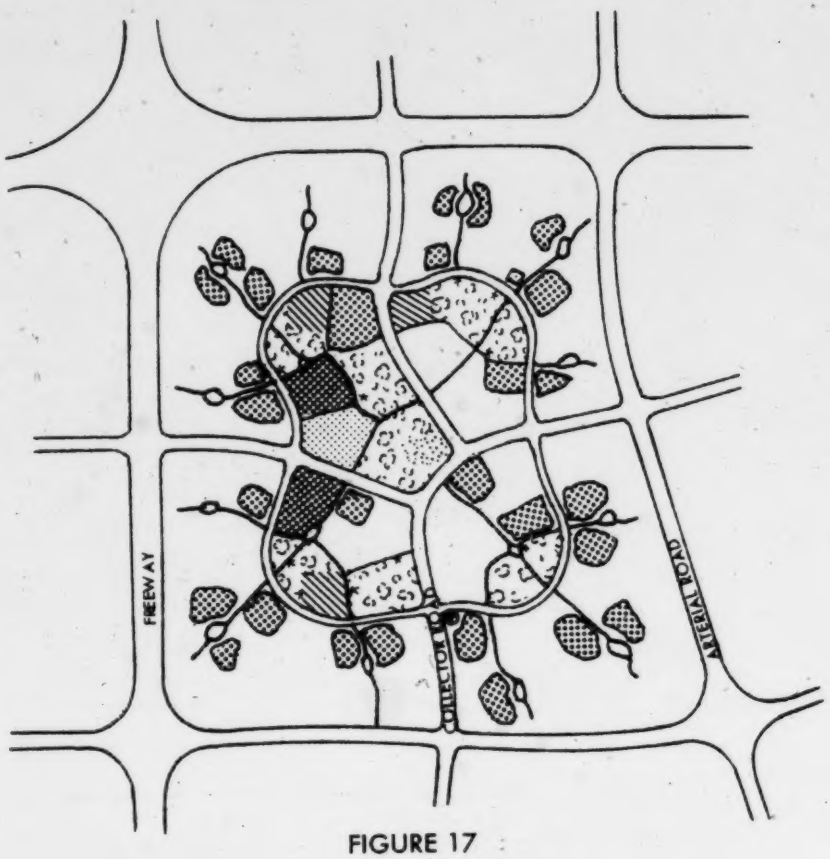

FIGURE 17

SCHEMATIC COMMUNITY STRUCTURE

- ELEMENTARY SCHOOL SITES
- JUNIOR HIGH SCHOOL SITE
- COMMUNITY CENTRE
- MEDIUM DENSITY HOUSING SITES
- HIGH DENSITY HOUSING SITES
- PARK AREAS
- LOW DENSITY HOUSING SITES
- TRAIL AND MINI-PARK

Source: City of Edmonton, Planning Department

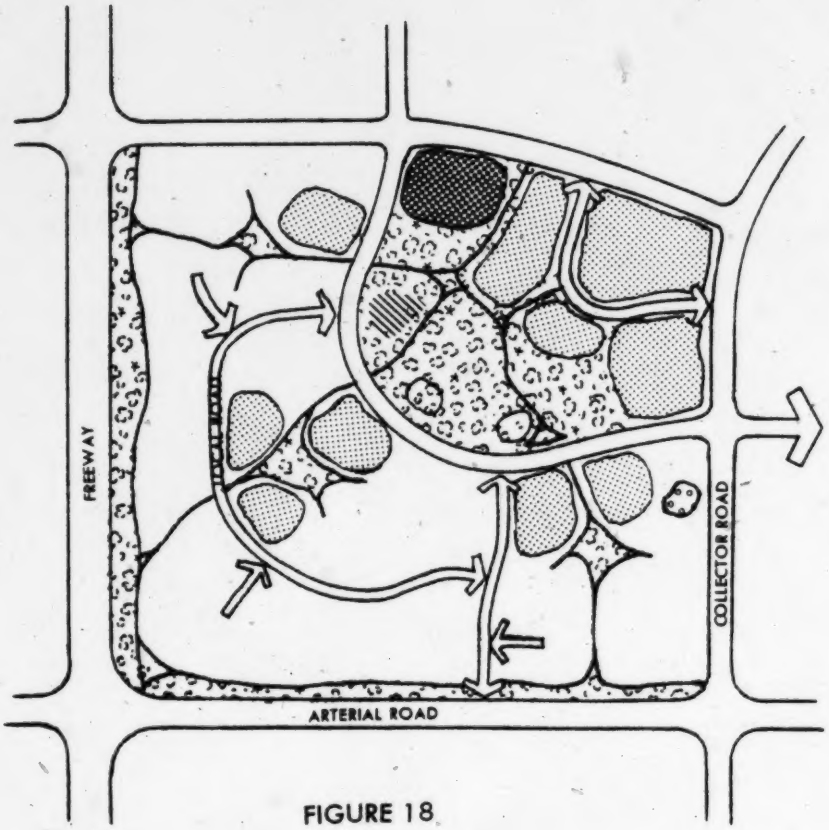

FIGURE 18

SCHEMATIC NEIGHBOURHOOD STRUCTURE

- ELEMENTARY SCHOOL SITE
- INSTITUTIONAL SITE
- HIGH DENSITY HOUSING SITE
- MEDIUM HOUSING SITE
- PARK AREAS
- LOW DENSITY HOUSING SITE
- WALKWAY AND MINI-PARK

Source: City of Edmonton, Planning Department

mobility. Within neighbourhoods, multi-family housing with individual sites of limited size functionally related to shopping, public transportation, and school and park facilities are encouraged. Neighbourhood densities generally range from 20 to 24 persons per gross acre on the periphery, with the density increasing towards the core. It is evident that Edmonton's neighbourhoods have been patterned according to Perry's 'Neighbourhood Unit Concept' since many of its principles have been incorporated into their design.

When preparing outline plans, as many factors as possible which could affect the planning and development of an area are considered. Natural features and site conditions, for example, are given careful consideration both as positive features to be emphasized and as possible constraints on development. With the Riverbend-Terwillegar Heights Outline Plan area for example, it was pointed out that "a prime asset of the area is the excellent recreation potential offered by the River Valley and Whitemud Creek Ravine."[31] In fact, it was stated "that the topographical variations of the area are the greatest natural influence on the design concept."[32] Similarly, it was recommended in the West Jasper Place Outline Plan that "existing tree

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31 City of Edmonton, Planning Department, Riverbend-Terwillegar Heights District Outline Plan, 1977, p. 8.

32 Ibid., p. 10.

cover and other related natural landscape features should strongly influence both roadway and walkway design, and the layout of buildings."[33] The Clareview Outline Plan indicated that the physical conditions of the area were ideal for minimizing the cost of providing services. It stated that "the area slopes from northwest to southeast, thus making land drainage very simple."[34] Also, "the physical conditions are virtually perfect for the installation of sanitary sewers at minimum cost, waterworks and roads can be provided at a relatively low cost and soil conditions present no problems for the construction of building foundations."[35]

Outline plan areas are also designed to be related to existing developments. In the Casselman-Steele Heights Outline Plan it was considered important to relate the area to existing residential development in the Steele Heights subdivision and also to the proposed Clareview Outline Plan area. It was pointed out "that this interrelationship was essential to ensure proper linkages in transportation routings, the proper distribution of public facilities, especially schools and parks, and the clear

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33 City of Edmonton, Planning Department, West Jasper Place Outline Plan, 1967, p. 16.

34 M. V. Jones and Associates Limited, Clareview Outline Plan, May, 1972, p. 3.

35 Ibid., p. 3.

orientation of residential development from one neighbourhood to the next."[36]

Outline plans also serve to prevent premature subdivision. Harasym pointed this out when he said:

> Acreage developments are usually planned without regard to an overall plan and, as a result, are often bypassed when urban development occurs which, in turn, leads to the construction of unproductive and underutilized utilities, and uneconomic schools, garbage collection, and transit services.[37]

Finally, outline plans require the support and participation of land owners and residents. For example, a major portion of the Clareview area was controlled by developers actively supporting the outline plan. This allowed for planning, financing and development to proceed quickly and with substantial economies of scale through quantity purchasing and reduction of overhead.[38]

Design Innovations

The scale of outline plan areas appears to have encouraged design innovations. A major one was the

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[36] City of Edmonton, Planning Department, Casselman-Steele Heights District Outline Plan, July, 1971, p. 4.

[37] D. Harasym, The Planning of New Residential Areas in Calgary: 1944-1973, unpublished M.A. thesis, University of Alberta, Edmonton, Department of Geography, 1975, p. 199.

[38] M. V. Jones and Associates Limited, Clareview Outline Plan, May 1972, p. 3.

creation of comprehensive town centres, serving as focal points for entire outline plan areas. Located at the approximate geographic centre of each outline plan area, the town centre represents the most intensely active land use in the area. In addition to satisfying shopping demands, the town centre accommodates major facilities for employment, culture and entertainment, public services and high density housing. For example, in the Mill Woods Outline Plan area, a town centre is planned which would comprise some 250 acres of land, providing a focus for all major community activities.[39] Similarly, in the Castle Downs Outline Plan area, a 35 acre artificial lake is planned, along with a town centre, both serving as a focus for the entire area.[40]

The intent of creating town centres within outline plan areas was not necessarily to relieve congestion within the city centre nor to significantly compete with the city centre. Rather they were intended to complement the city centre and to concentrate those activities which are normally scattered haphazardly throughout the newly developing areas into compact and efficient centres.[41] Also, a

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39 City of Edmonton, Planning Department, Mill Woods, March 1971.

40 Reid, Crowthers and Associates, Castle Downs Outline Plan, 1973.

41 City of Edmonton, Planning Department, Riverbend-Terwillegar Heights District Outline Plan, 1977, p. 54.

major objective of town centre development was to create a sense of place through strong imagery or identity, a concept described by Kevin Lynch in his book Image of the City.[42]

Another major design innovation was the creation of comprehensive pedestrian walkway systems, connecting each residential area to its neighbourhood focus, one neighbourhood focus to another, and all development to the town centre (Plate 3). This was an important new design innovation since prior to the Outline Plan Concept, little consideration had been given to pedestrian requirements, particularly the home-to-school journey. Other design innovations included the establishment of a clear road hierarchy for traffic flow, planted mounds acting as buffers to screen residential areas from major roadways (Plate 4), the placing of all utilities underground, subdivisions without lanes, and housing turned around to face walkways and open spaces rather than streets.[43]

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[42] K. Lynch, The Image of the City, M.I.T. Press, Cambridge, 1960, 194 pp.

[43] For example, some of the houses in the Mill Woods Outline Plan area and the West Jasper Place Outline Plan area are turned around, the front facing common open space. This concept was applied by Stein and Wright to an area of single family homes in Radburn, New Jersey.
C. S. Stein, Towards New Towns for America, New York: Reinhold Publishing Corporation, 1957.

Plate 3

Pedestrian Walkway in Mill Woods

Plate 4

Landscaped Buffer Along 91 Street in Mill Woods

GOALS AND OBJECTIVES FOR OUTLINE PLANS

As previously pointed out, outline plans provide an overall structure for urban expansion in relation to existing and anticipated development in adjoining areas. They must also provide guidelines for neighbourhood development and an implementation framework to co-ordinate the final plans of the various developers. However, because of constant changes in demands, standards, habits and customs, forecasts and plans can be valid only for the immediate future. An outline plan therefore must be sufficiently adaptable to accommodate changing standards and values from one phase of development to the next. This conclusion led Edmonton planners to suggest that the most appropriate overall guide to follow in the preparation of an outline plan for any expansion area was to make reference to one of the basic goals of the General Plan which was:

> To provide a plan for the orderly and economic growth and renewal of the City consistent with the need of providing the best possible living, working, shopping and recreational environment.[44]

The following sections describe and explain the fundamental goals and objectives for outline plan areas.

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[44] City of Edmonton, General Plan, Edmonton, 1967, p. 4.2.

Density Requirements

The outline plan determines densities for each area and apportions land for open space in relation to these densities. Densities are calculated on the basis of average household size, the number of dwelling units per acre, and the types of housing proposed. The estimated gross density for outline plan areas is in the range of 20-25 persons per acre, most being around 24 persons per acre. However, in view of the trend towards higher densities in the outline plan areas, neighbourhood densities are expressed as a density range rather than by a single arbitrary figure. As pointed out in the Riverbend-Terwillegar Heights Outline Plan, "density measurement is a fairly nebulous and subjective area, where certain "magic figures" simply do not exist."[45] It further adds, "to labour with the assumption that they do, would unduly restrict innovative development proposals."[46] For example, in the Riverbend-Terwillegar Heights area, neighbourhood densities range from an existing low of 10 people per gross acre to a proposed high of "30 plus" people per gross acre, the overall average neighbourhood density being

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[45] City of Edmonton, Planning Department, Riverbend-Terwillegar Heights District Outline Plan, 1977, p. 79.

[46] Ibid.

approximately 24 people per gross acre.[47]

In developing the density distribution plan for West Jasper Place, the planning department reviewed development patterns emerging elsewhere in the city and the capacity of the outline plan area in terms of the population that could be accommodated by the circulation systems, the school and park distribution plan and the utility networks. The result of the review indicated that the area could accommodate 23.4 persons per gross acre, an increase over the original proposal of 19 persons per gross acre.[48] The Planning Department concluded, that since there was a general trend towards higher density residential development as a means of providing more variety and economy in housing, the original 1967 West Jasper Place Outline Plan should be brought up to the current density levels being applied to all other outline plan areas in the city.[49]

However, in recent years residents have expressed dissatisfaction with the amount of high density housing being provided in new suburban areas. Edmonton planners feel that this dissatisfaction stems from several concerns:

1. perception of a more crowded, less private, and less attractive

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[47] Ibid., p. 29.

[48] City of Edmonton, Planning Department, West Jasper Place Outline Plan Amendments, 1972, Section 4.

[49] Ibid., Section 1.

environment, especially with respect to the impact of multiple housing development.

2. increased competition for the use of limited community facilities, particularly open space.

3. the delay in providing recreational, educational, and other neighbourhood and district facilities and services prior to a supporting population residing in the area.

4. possible social stress resulting from a greater diversity in the household composition, lifestyle, type of tenure, and income of the neighbourhood population.[50]

In view of these concerns, planners are evaluating the distribution and design of multi-family housing at the neighbourhood and District Outline Plan stages. They are recommending that residential districts should be "heterogeneous and provide for socially balanced and integrated communities by providing a variety of housing alternatives and neighbourhoods."[51] On the other hand, they are also recommending that "neighbourhoods be more homogeneous in housing form than districts and need not contain the full range and composition of housing types offered at the district level."[52]

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[50] City of Edmonton, Planning Department, Guidelines for the Distribution and Design of Neighbourhood Density, July, 1978.

[51] Ibid.

[52] Ibid.

Living Areas

The basic structure of an outline plan reflects a division of an area into neighbourhood units. A combined elementary school and park site is located approximately in the geographic centre of each unit (Plate 5). The neighbourhoods are sized so as to support an elementary school of economic size. In this regard, a neighbourhood unit occupies about 200 acres of land and the walking distances involved are such that the area can be served efficiently by a single public elementary school, community league facility, passive recreational park, convenience store and local bus route. These amenities, along with the higher density residential nodes constitute a visual or symbolic focus, which may help to foster a sense of neighbourhood identity.

Within each neighbourhood, the organization of the different types of residential uses stems from consideration of the probable needs and desires of the residents. A prime locational requirement of the family unit is relative proximity to elementary schools and park areas. However, in order to place the greatest number of children close to the school and park facilities, the higher density family accommodation is located adjacent to these facilities. The Clareview Outline Plan states, "that this relationship tends to compensate for the reduction of

Plate 5

Combined Elementary School and Playground in Mill Woods

private open space implied by higher density accommodation."[53] It further adds "that lower density family housing, producing less school children per unit area, has a relatively weaker relationship with school and park facilities and is thus located further from these functions."[54]

Higher density non-family types of accommodation are usually located further away from the school, adjacent to a commercial facility, transportation artery, such as a transit route, or a park facility. Generally, all medium and high density family and non-family accommodation are located adjacent to significant natural and man-made amenities, such as a park, river valley, ravine, community centre, bus route or rapid transit line.

COMMERCIAL AREAS

An outline plan makes provision for a systematic and orderly pattern of commercial development that serves the anticipated population increase and distribution. The establishment of large scale regional commercial facilities is restricted in some outline plan areas due to the close

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[53] M. V. Jones and Associates, Clareview Outline Plan, May 1972, p. 20.

[54] Ibid.

proximity of an already existing regional centre.[55] For example, the Southgate Shopping Centre provides a significant percentage of the regional shopping requirements of the Kaskitayo Outline Plan area (Plate 6). Similarly, the Meadowlark and Centennial Shopping Centres provide the regional shopping requirements of the West Jasper Place Outline Plan area.

In the event that a regional commercial facility is not required in an outline plan area, commercial development takes place on two levels: the district and the neighbourhood.

District Centre

A district centre is necessary to meet a variety of commercial and public service requirements of the residents of an outline plan area.[56] Unlike Carver's town centre, which was meant to provide services for a population of 15,000 to 20,000 people, the size of a district centre is related to the number and variety of commercial facilities

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[55] For a more detailed description of a Regional Shopping Centre see: City of Edmonton, General Plan, 1967, pp. 6.4-6.5. See also: N. Cook, Perceptual Variations of Retailing in Edmonton, unpublished Ph.D. thesis, University of Alberta, Edmonton, 1972, 278 pp.

[56] For a more detailed description of a District Shopping Centre see: City of Edmonton, General Plan, 1967, p. 6.5. See also: N. Cook, Perceptual Variations of Retailing in Edmonton, unpublished Ph.D. thesis, University of Alberta, Edmonton, 1972, 278 pp.

Plate 6

Southgate Shopping Centre, Southwest Edmonton

needed to serve the residents of an entire outline plan area, and to the number and types of other uses which form part of the complex. These other uses might include such facilities as a branch library and health clinic. It is suggested that these uses would improve the viability of the centre and provide the area with a more defined focus for a wide variety of community functions.[57]

The district centre must be as accessible as possible from an outline plan area since it forms the core or focus of the area. These centres are therefore located at the intersection of two major arterials. It is also in this vicinity that a high school - district park complex is located so that a core of commercial, institutional, recreational and high density residential uses is established.

Neighbourhood Centre

Commercial facilities at the neighbourhood level are divided into two categories.[58] The first type is one which contains a large supermarket as the major tenant and serves approximately three to four neighbourhood units.

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[57] City of Edmonton, Planning Department, Kaskitayo Outline Plan: Development Policy and Guidelines Report, August 1970, p. 22.

[58] For a more detailed description of a Neighbourhood Shopping Centre see: City of Edmonton, General Plan, 1967, p. 6.5. See also: N. Cook, Perceptual Variations in Retailing in Edmonton, unpublished Ph.D. thesis, University of Alberta, Edmonton, 1972, 278 pp.

These centres may be located in conjunction with a junior high school to form a neighbourhood core (Plate 7).

The second type of neighbourhood centre is one containing a small grocery store and several other stores oriented to meet the day-to-day needs of local residents. These centres serve one neighbourhood and may be located in conjunction with an elementary school, again at the core of the neighbourhood (Plate 8).

Site sizes for both types of neighbourhood centres are determined in relation to the market being served and the types of uses being accommodated. Also, it is considered important "that such centres are integrated visually and functionally with the residential areas in which they are located."[59]

School Areas

The elementary school forms the nucleus of the neighbourhood unit around which a local shopping centre and neighbourhood park are located. For every three to four neighbourhoods a junior high school is provided and is located in conjunction with a large neighbourhood shopping centre and medium density residential uses. At the district level, a high school complex is provided in

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59 City of Edmonton, Planning Department, Kaskitayo Outline Plan: Development Policy and Guidelines Report, August 1970, p. 23.

Plate 7

Large Neighbourhood Centre - Millbourne Shopping Centre in Mill Woods

Plate 8

Small Convenience Neighbourhood Centre - Lee Ridge Shopping Centre in Mill Woods

conjunction with a district park, district shopping and service centre and the highest density residential uses permitted in an outline plan area.

The development of residential areas should proceed so that three or four neighbourhoods are completed to accommodate a junior high school, and, in a similar way, a group of communities for a senior high school. The Kaskitayo Outline Plan points out, "it is important that development proceed neighbourhood by neighbourhood to avoid the cost of "bussing" pupils to elementary schools."[60]

The number of schools required in an outline plan area depends upon the ultimate population projected for the area, while the locations of these facilities depends upon the distribution of neighbourhoods and the location of the district and large neighbourhood shopping centres. Actual neighbourhood sizes are determined by the number of school children generated, necessary to fill an elementary school.[61]

In all outline plan areas, advantage is taken of the highest degree of joint school and park uses for maximum utilization of sites. This includes combining Public and Separate schools on one site, combining different school types on one site, and combining parks and school sites.

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[60] Ibid., p. 24.

[61] Ibid.

Park and Recreation Areas

Parks and recreation facilities are developed in locations which are the most convenient to the greatest number of people. To achieve this goal, locations in conjunction with school and community centre complexes are considered the most appropriate. In addition, parkland is located, wherever possible, in areas of natural beauty, such as treed areas, areas with extensive views, and areas along ravines.

Two types of park facilities are provided in outline plan areas. At the district level, district parks are located in conjunction with the high school campus, and in close proximity to the district shopping centre and areas of higher residential density.[62] In this location, the district recreational facilities are situated at the hub of the transportation network for the area and as close as possible to the greatest concentration of residents in the area.

At the local level, neighbourhood parks, playgrounds and playfields are located, together with elementary schools, at the approximate centre of each neighbourhood unit.[63] In some instances, amenity parks are also

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62 For a detailed description of a district park see: City of Edmonton, General Plan, 1967, p. 8.4.

63 For a detailed description of a neighbourhood park see: City of Edmonton, General Plan, 1967, p. 8.4.

introduced throughout each neighbourhood to provide visual relief within the housing mass. However, residents have expressed dissatisfaction with the lack of leisure park space in new residential areas. The large park-playground in conjunction with the elementary school is adequate for children and teens engaged in active recreation, but it does not meet the needs of those who wish to engage in passive outdoor activities. This suggests that Edmonton planners should consider allocating more leisure park space at various locations within neighbourhoods.

Roadways

The planning and design of roadways for outline plan areas takes into consideration the nature of adjacent land uses as well as the volume and direction of traffic generated. This is based on the population and employment characteristics of the area. Within an outline plan area there are two conflicting desire-line patterns: outward from the area to the regional shopping facilities, city centre and employment areas and inward to the shopping, recreational and educational facilities.

In the overall design of an outline plan area the roadway network is of a hierarchical design so that each road functions according to its design. Such a hierarchy enables the internal street pattern of a neighbourhood to

provide efficient access to all parts of the neighbourhood, while at the same time non-local or through traffic is eliminated and a quiet, safe environment is created. The roadway hierarchy is one which discerns between freeways, major arterials, and local residential roads and is structured to meet the following requirements:

(a) only arterial roadways should connect with freeways.

(b) freeways and major and minor arterial roads should not penetrate neighbourhood units.

(c) local roads should connect onto minor arterials and not provide a link between them.

(d) only local residential roads should directly serve residences.[64]

Pedestrian Walkways

An extensive pedestrian walkway system forms one of the most dominant design features of an outline plan area. The pedestrian system is purposely intended, not only as a means of making available a safe recreational area near every dwelling, but "to provide a pleasant and safe route for children going to school."[65] In this regard, the system links all the housing groups to the elementary

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[64] City of Edmonton, Planning Department, Kaskitayo Outline Plan: Development Policy and Guidelines Report, August, 1970, pp. 30-31.

[65] City of Edmonton, Planning Department, Riverbend-Terwillegar Heights Outline Plan, 1969, p. 37.

schools, junior high schools and senior high schools. It also provides direct access for people on foot to bus stops and key facilities within the outline plan area. Since they form part of the circulation system, pedestrian walkways are provided out of the 30% circulation reserve which may be required to be dedicated under the Subdivision and Transfer Regulations.[66] The walkway system is essentially for pedestrian circulation and while it does double as a recreation facility, it is essentially for movement.

Three different types of walkways are considered in outline plan areas:

(1) a spinal walkway system consisting of primary major walkways which are directly connected to access walks and sidewalks. Conventional sidewalks form an integral part of the total pedestrian circulation system.

(2) a full walkway system employing major and minor walkways and very few sidewalks. Each residential structure is served by a walkway.

(3) a partial walkway system which is a combination of a full and a spinal walkway system. Sidewalks form part of the circulation system.[67]

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[66] Province of Alberta, Subdivision and Transfer Regulation, Section 19, Subsection 2, O.C. 215-67.

[67] City of Edmonton, Planning Department, Kaskitayo Outline Plan: Development Policy and Guidelines Report, August, 1970, p. 32.

Public Transportation

In the transportation section of the General Plan, rapid transit and surface transit systems were recognized as important needs.[68] It was stressed that a high level of service is required to accommodate the needs of those dependent upon public transit for mobility and to minimize downtown congestion caused by private vehicles.[69] An outline plan recognizes that a high standard of public transit facilities is required to provide good access, especially to the University of Alberta and the central area, two of the most important employment generators in the city. In subdivision areas, provision is made for efficient bus routes giving priority service to schools, churches, community centres, commercial developments and high density areas. In addition to a high level of bus service, provision is made for the integration of rapid transit in outline plan areas.[70] Rapid transit stations would be located along transportation corridors and in the town centre complex. Bus routes which focus on the town centre would provide connections to the rapid transit line.

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[68] City of Edmonton, General Plan, 1967, pp. 12.4-12.6.

[69] Ibid.

[70] See for example: Millwoods Outline Plan, Clareview Outline Plan and Riverbend-Terwillegar Heights District Outline Plan.

Public Housing

A need that was recognized in the General Plan was that of providing the opportunity for every citizen to have a decent place in which to live. This was especially true for those families or individuals who, through reasons of disability, fixed income levels or lack of economic capacity, were forced to depend upon substandard accommodations.[71] In view of this, on May 10, 1971, City Council made the following resolution regarding public housing:

> that 5% of the population of future subdivision be made available for public housing in new areas.[72]

An outline plan therefore provides sites for public housing purposes. The sites are designated in accordance with the following guidelines:[73]

(1) the sites should be of sufficient number to accommodate at least 5 per cent of the projected population for the neighbourhood.

(2) the sites should be designed in accordance with the density requirements and types of housing presently permitted by R-2A zoning.[74]

(3) individual sites should not be larger than three acres in size.

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71 City of Edmonton, General Plan, 1967, p. 11.3.

72 City of Edmonton, Council Minutes, May 10, 1971.

73 City of Edmonton, Planning Department, Term of Reference for Neighbourhood Outline Plans, Working Paper, 1972.

74 City of Edmonton, Bylaw 2135, Zoning Bylaw, Part V, Section 23, June, 1978 (as amended).

(4) sites should be conveniently located in relation to facilities concerning the neighbourhood, such as schools, parks and transportation.

Consistent with city policy, since 1972 sufficient public housing has been provided to house five per cent of the population of each neighbourhood unit. However, the public's reaction to public housing has not been positive. Although most residents recognize the need for public housing, they object to it being located anywhere near them. It has therefore been suggested by Edmonton's planners that public housing developments should be limited to sites of less than three acres, and that no more than one development should be included within a neighbourhood. They believe that this would avoid an over-concentration of public housing in any one area.

CONCLUSION

Since 1967, the Outline Plan Concept has been used as the basic guide for planning the residential environment of Edmonton's new suburban areas. In applying this concept, emphasis shifted from subdivision design and implementation to a structured plan preparation process in which the final detailed design stage evolved through a

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75 City of Edmonton, Planning Department, Guidelines for the Distribution and Design of Neighbourhood Density, July, 1978.

series of steps. Because it was intended to provide a frame of reference for the developer before individual subdivisions were designed, an outline plan states city requirements for the location of roads, utilities, public facilities such as parks and schools and possible commercial sites. With the location of these basic land uses decided upon, subdivision applications can be co-ordinated. With the existence of a large scale plan, an efficient traffic circulation and transit system is possible, schools and parks can be sited to serve the greatest number of people in a convenient and economical manner, shopping facilities can be located to best serve the community, and incompatible land uses can be avoided.

CHAPTER 4

MILL WOODS OUTLINE PLAN AREA

This chapter begins with an examination of the Mill Woods area as an example of the use of the Outline Plan Concept. A brief discussion of the development history is presented, followed by a description and analysis of the residential design features, with special reference to the planning objectives for the area. The chapter concludes with an analysis of the results of a study conducted on the residents of the Richfield Neighbourhood Unit within the outline plan area.

Development History

Mill Woods is located in the southeastern sector of the city, approximately seven miles from the city centre. It is bounded by 51st Avenue to the north, 34th Street to the east, 15th Avenue to the south,[1] and on the west by 91st Street (Figure 19). The planning area for Mill Woods covers over nine square miles of land, totalling

[1] Due to the large sewer capacity, on February 22, 1977, City Council approved the extension of the southerly boundary to the proposed outer ring freeway at approximately 9th Avenue. This extension included approximately 139 acres and required approval from the Provincial Government Department of Environment because it infringed on the Restricted Development Area.

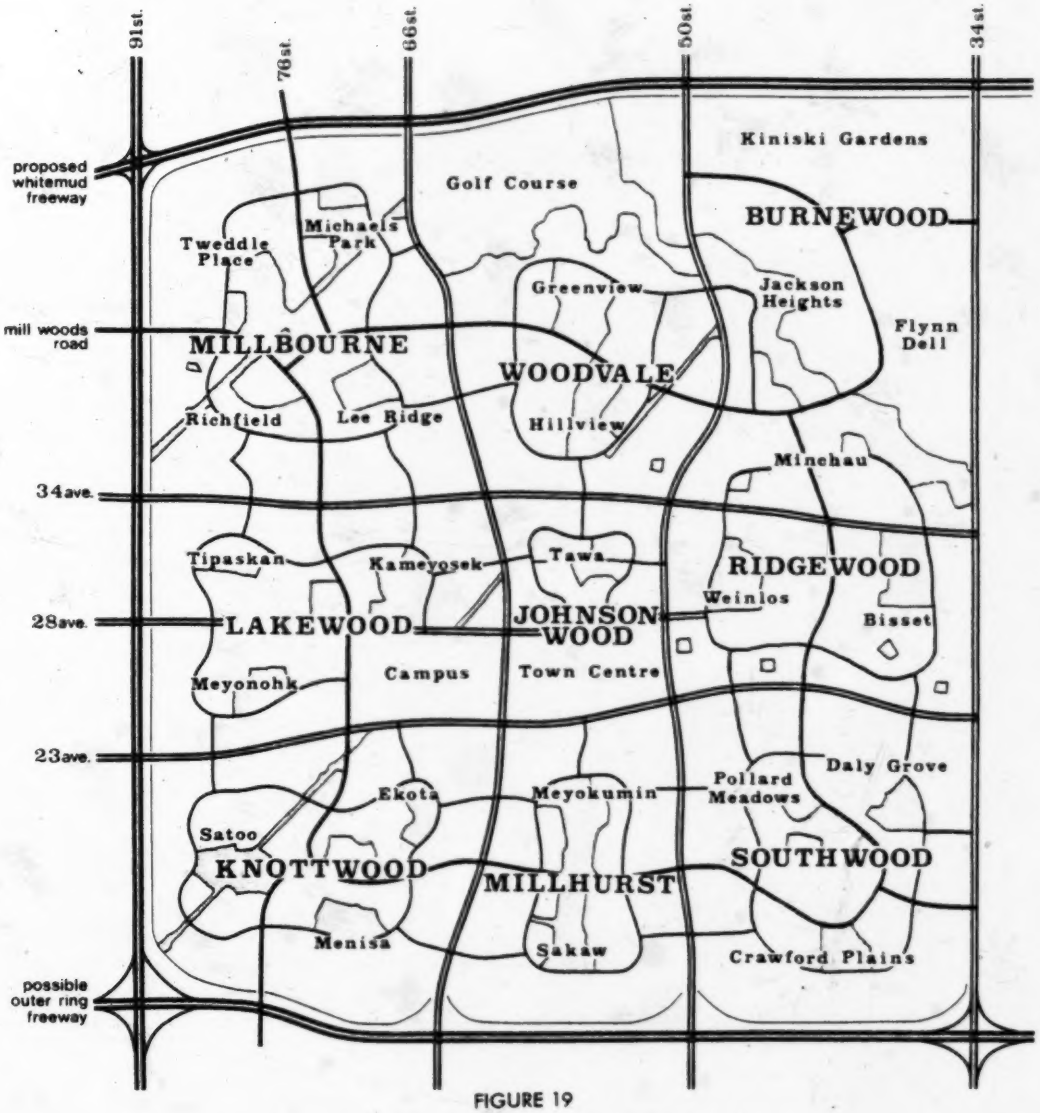

FIGURE 19

MILL WOODS

NORTH

0 ½ MILE

Source: City of Edmonton, Planning Department

approximately 6500 gross acres and will house a projected population of some 120,000 people.[2]

The Mill Woods planning area was annexed to the city in two stages. As illustrated on Figure 20, the first stage, in 1964, included approximately 900 acres of land in the northwest section, and was part of a much larger annexation in the southeastern part of the city. The second stage, in 1971, comprised some 5600 acres of land and constituted the remainder of the outline plan area.

The population of Mill Woods has increased dramatically, from 373 in 1971, to 13,353 in 1976,[3] and 21,223 in 1978.[4] The latest density forecast for the area when completely developed is 19.8 persons per gross acre,[5] which is slightly lower than the 21.59 persons per gross acre proposed by the original development concept.[6] This could be a reflection of the public's reaction to higher densities in outline plan areas.

The Mill Woods project was initiated early in 1969 as

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[2] City of Edmonton, Planning Department, Mill Woods, March, 1971.

[3] Statistics Canada, Census of Canada, 1976.

[4] City of Edmonton, Civic Census, 1978.

[5] City of Edmonton, Planning Department, Current and Planned Densities, Edmonton Outline Plan Areas, 1977, General Plan Review, 1978.

[6] City of Edmonton, Planning Department, Mill Woods, March, 1971.

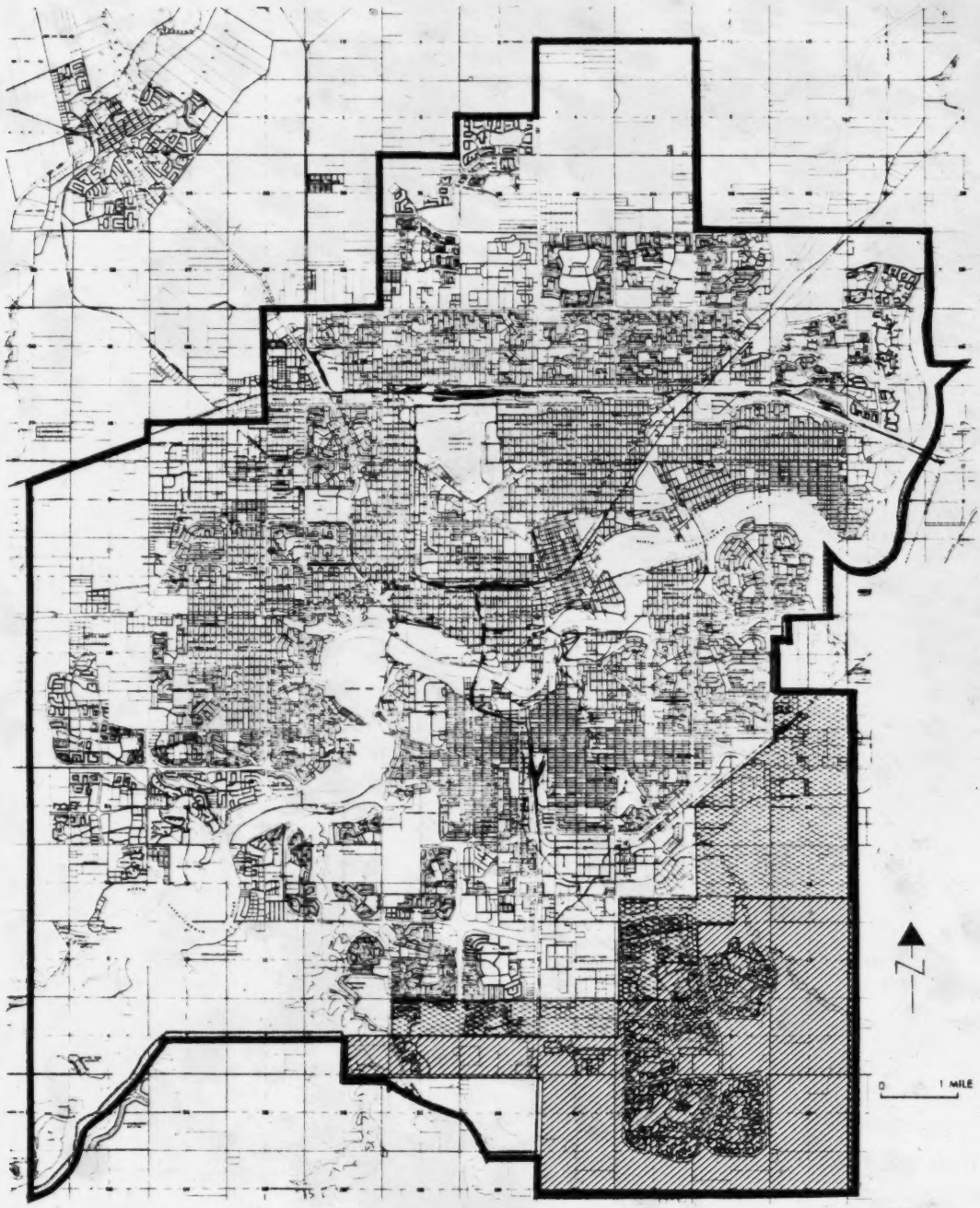

FIGURE 20

ANNEXATION - MILLWOODS

1964 ANNEXATION

1971 ANNEXATION

CITY BOUNDARY -1976

Source: City of Edmonton, Planning Department

a result of difficulties the city was experiencing in housing supply and transportation implementation.[7] In response to rising costs of services and land, in 1969, the Province of Alberta offered the assistance of the Alberta Housing Corporation for the purposes of assembling, servicing and disposing of land for housing purposes. The agreement between the City of Edmonton and the Alberta Housing Corporation described the objects of the whole land assembly program to be:

> (1) the maintenance of a continuous and adequate supply of land for housing so that the trend to spiralling costs, particularly for land, may be reversed; and
>
> (2) the progressive servicing of land in the area to provide public and private housing of good quality at minimum costs.[8]

The emphasis of the proposal focussed on reducing land costs through the acquisition of a large tract of land to be utilized as a land bank. Briefly, land banking refers to land which is acquired in advance of its intended development, either in the sense that it is held for years before development begins or because development follows acquisition immediately, but the project is sufficiently large that it takes many years of regular construction to

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[7] Ibid.

[8] Ibid.

deplete the project.[9] The Alberta Housing Corporation subsequently acquired 4425 acres of land or 68% of the planning area, with the intent of selling it to the city over a fifteen year period, beginning on January 1, 1971.[10] The monies realized would be exclusively used in a land bank, so that the land sold would result automatically in land being acquired in other parts of the city.[11]

The Mill Woods Outline Plan received approval from the Municipal Planning Commission on April 27, 1971 and on June 7, 1971 received approval from City Council.[12] This plan was to serve as a basic guide for all subsequent development in Mill Woods. As illustrated on Figure 21, the Mill Woods area was expected to develop in three major growth sequences. First was the northwesterly and westerly sectors, followed by the southwesterly, south and southeasterly sectors, and finally the north and northeasterly sectors. The northwesterly sector was chosen for the first stage of development because of the alignment of the deep sewer. The location of the first major subdivision,

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9 P. Spurr, Land and Urban Development, ed. by James Lorimer, Toronto, 1976, p. 245.

10 City of Edmonton, Planning Department, Mill Woods, March, 1971.

11 Ibid.

12 City of Edmonton, Planning Department, Subdivision Status Report, November, 1978.

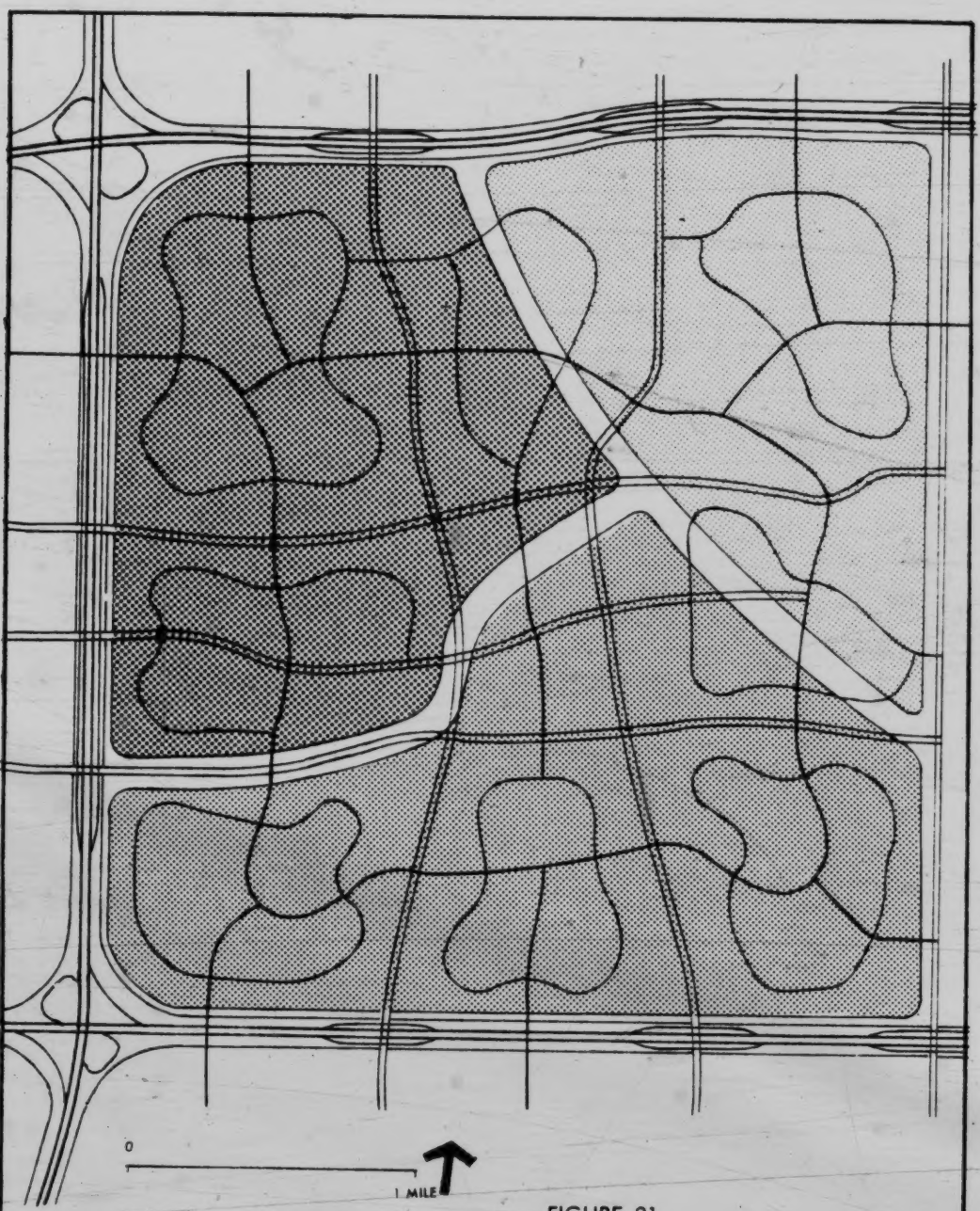

FIGURE 21

DEVELOPMENT STAGES-MILL WOODS

STAGE 3
STAGE 1
STAGE 2

Source: City of Edmonton, Planning Department

Richfield, was determined primarily by the availability of servicing, the major element being access to storm and sanitary sewer lines.[13]

Physical Features

The Mill Woods planning area was rural in character, with large farm holdings predominating. Much of the area had gently rolling farmland, land generally of prime agricultural quality. Although the land was cleared of natural vegetation, scattered tree stands occurred throughout the area. Major tree growth occurs along the entire length of Mill Creek, the most significant single geographical feature, which traverses the northeastern quadrant of Mill Woods. Special effort was made to protect these existing concentrations of trees, since agricultural use of much of Mill Woods had left only scattered tree groupings.[14]

General Structure

The development concept for Mill Woods, as illustrated on Figure 22, has been structured to be conducive to: "the realization of social and economic objectives and to be responsive to changing life styles and technological

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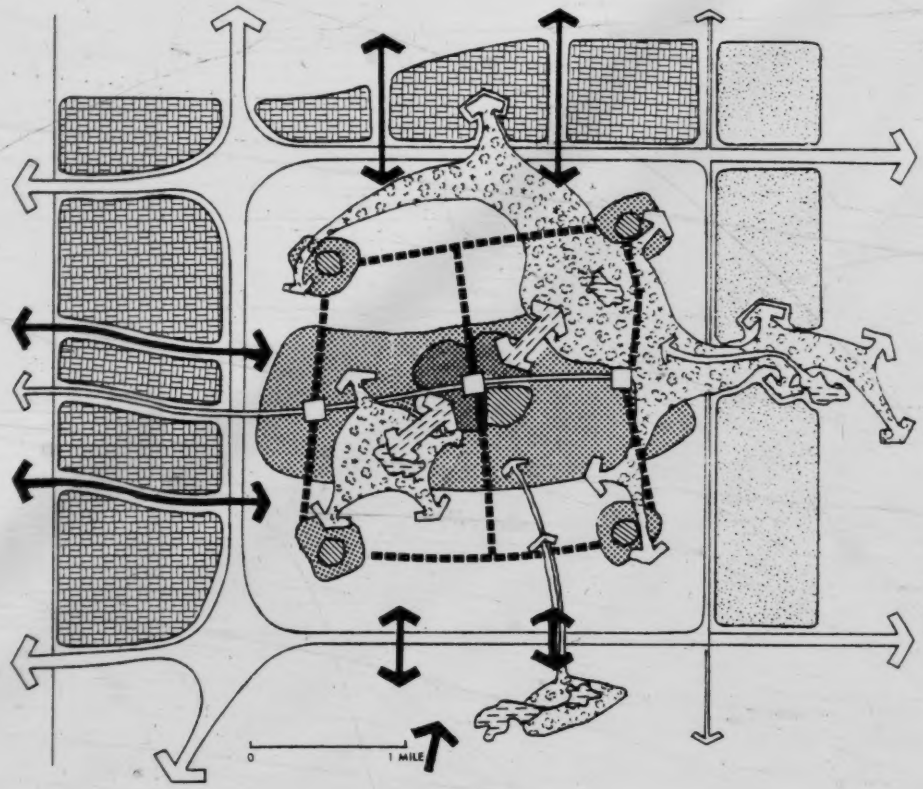
[13] City of Edmonton, Planning Department, Mill Woods, March, 1971.

[14] Ibid.

FIGURE 22

MILL-WOODS DEVELOPMENT CONCEPT



Source: City of Edmonton, Planning Department

advances."[15] It reflects two fundamental goals:

(1) to reduce the price of housing generally through land marketing and servicing programs, and

(2) to upgrade the quality of the residential environment respecting the social, physical and economical needs of the residents.[16]

The outline plan for Mill Woods is comprised of nine communities linked together by major roadways as illustrated on Figure 23. Beginning with the basic element of a dwelling unit, the outline plan was built on the principle of individual house groupings and clusters of different dwelling types functionally linked together by transportation systems. The dwelling units are centered around educational and recreational facilities in such a manner as to maximize choice and convenience to the residents while allowing economical provision of servicing facilities and programs.

The neighbourhood units in Mill Woods are based upon the geographical location and separation of residences from the elementary school. Each unit is comprised generally of 180 to 200 gross acres and supports a population of 4,500 to 5,500 people.[17] Neighbourhood services are concentrated around a neighbourhood centre, comprised of

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[15] Ibid.

[16] Ibid.

[17] Ibid.

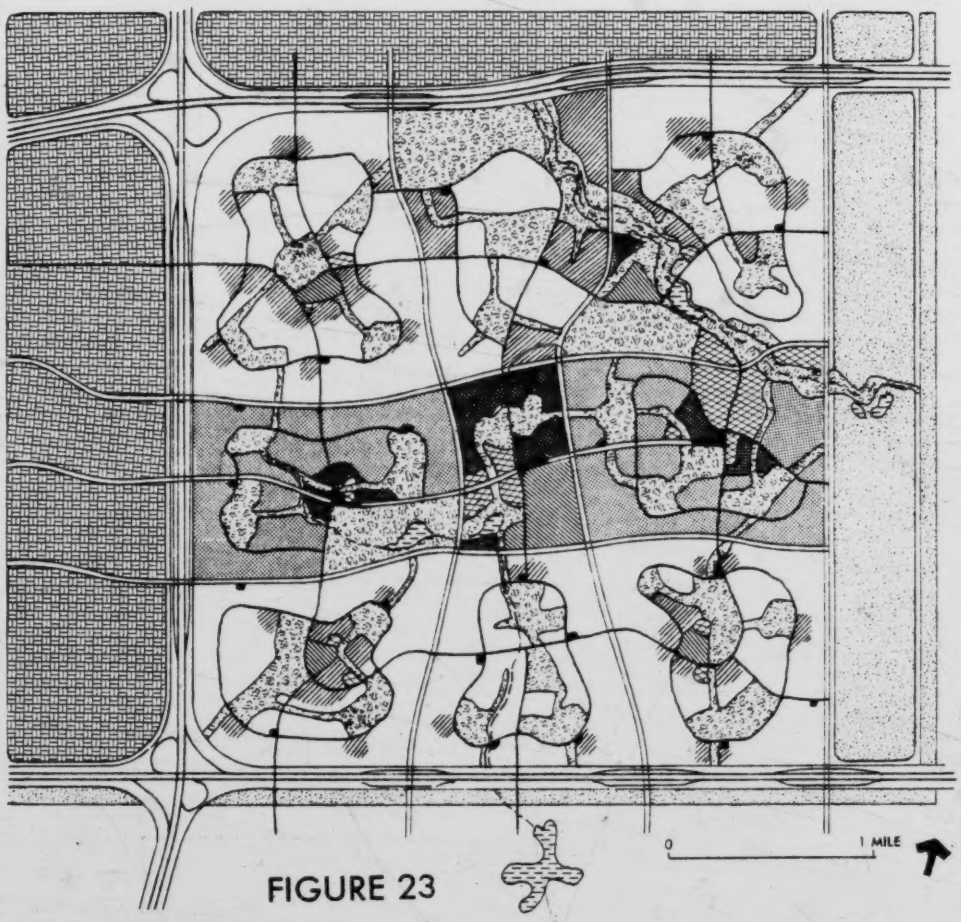

FIGURE 23

MILL WOODS OUTLINE PLAN

HIGH DENSITY HOUSING AREA
MEDIUM DENSITY HOUSING AREAS
LOW DENSITY HOUSING AREAS
PARK AREAS
MULTIPLE FAMILY HOUSING AREAS
TOWN CENTRE AND COMMUNITY CENTRES
INDUSTRIAL AREAS
INSTITUTIONAL AREAS
AGRICULTURAL AREAS
WATERCOURSE
TRANSIT STATION
STREAM
NEIGHBOURHOOD COMMERCIAL

Source: City of Edmonton, Planning Department

educational, recreational and community league facilities. Pedestrian walkways are provided as a safe and convenient means for the majority of the neighbourhood children to reach school destinations. Shopping and multiple family sites are directly related to the walkway system, complementing its role as an extension of the public transportation system. Each neighbourhood is clearly defined by major roadways, and local streets are designed to provide convenient residential access while discouraging through traffic. Generally of a smaller right-of-way width, the local roadways provide direct vehicular access to small house groupings, respecting the need for convenience, safety and noise abatement. It is evident that many of Perry's Neighbourhood Unit Principles were incorporated into the design of Mill Woods neighbourhoods with emphasis being placed on creating a safe and convenient living environment for the residents.

The communities in Mill Woods consist of either three or four neighbourhood units, comprising 15,000 to 20,000 persons.[18] The community centre consists of a group of service facilities comprised of commercial, educational, and institutional elements supplemented by recreational functions. In all communities other than those containing the community commercial centres, the focal point of

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[18] Ibid.

activity centers on secondary educational facilities or the junior high schools of the Public and Separate School Boards. All centres are located on bus routes, complementing direct access by car and pedestrian walkways. It was felt that by grouping these facilities together, a sense of identity or place would be created, together with advantages of functional linkage and interaction of uses.[19]

Mill Woods will focus on a town core, situated at the approximate geographic centre of the development area. Within the centrally located intensively developed urban core area, the major commercial, cultural, social and institutional activities will be concentrated. High density residential housing and open space elements will serve to link the complex together based upon the proposed rapid mass transportation systems serving the core. It was considered important that the town centre emphasize pedestrian convenience, functional interrelationship of uses and retention of human scale, since it will function as the major meeting place for all residents of Mill Woods.[20]

RICHFIELD NEIGHBOURHOOD UNIT

To conclude this chapter, an analysis is presented of the results of a study conducted on a sample of the

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[19] Ibid.

[20] Ibid.

residents of the Richfield Neighbourhood Unit within the Mill Woods Outline Plan area. The study focussed on two objectives. The first was to assess people's overall responses to the neighbourhood environment through their personal likes and dislikes. The second was to assess their responses to particular features of the neighbourhood through their relative satisfaction and dissatisfaction with planning objectives for the neighbourhood.

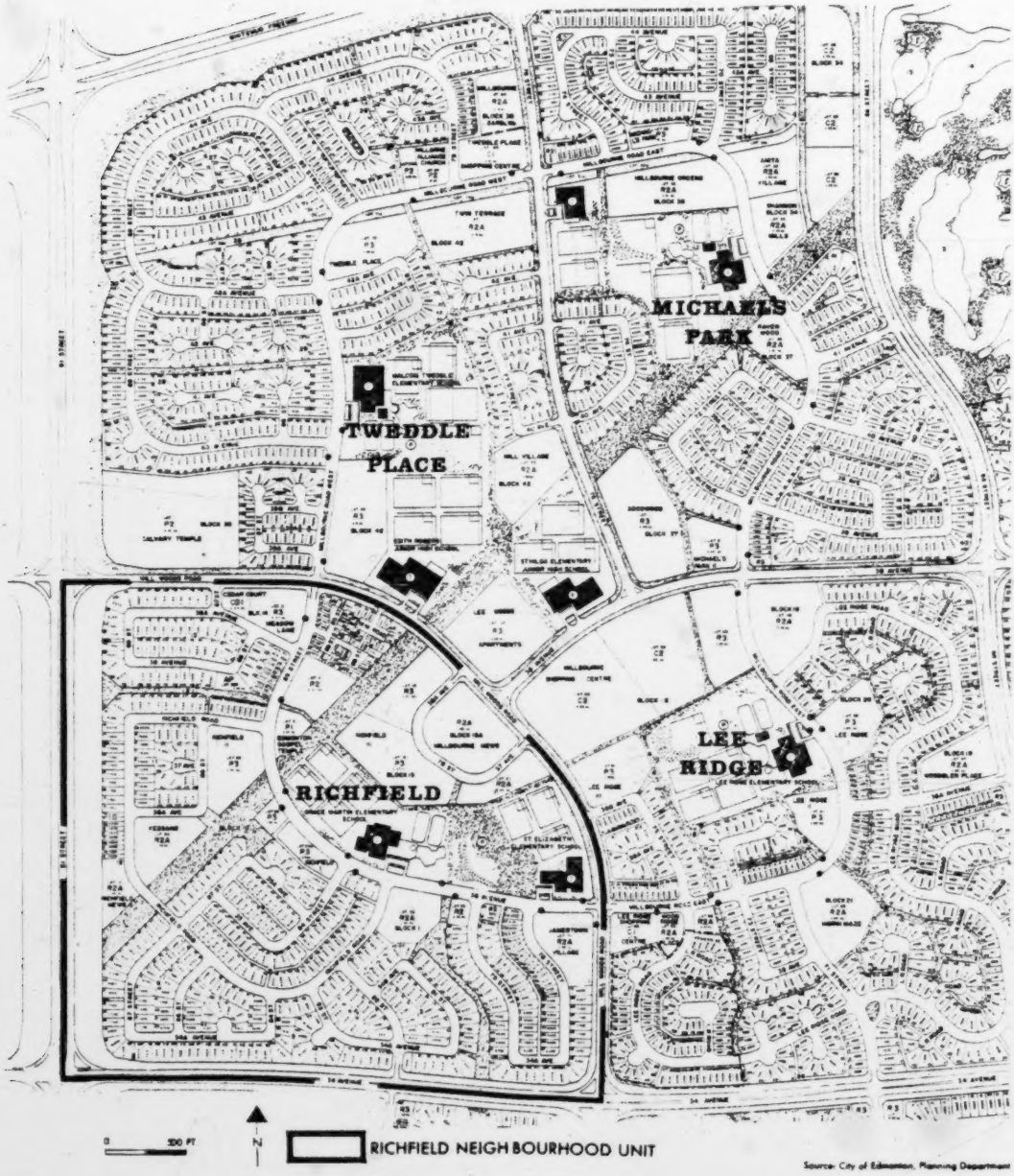
The Richfield Neighbourhood Unit was chosen for study, first, because it was the first neighbourhood planned and developed within the area. Second, its boundaries have remained unchanged. This was an important consideration since the same planning area could be evaluated through time. Finally, much of the neighbourhood had already been developed which allowed first hand observation to aid in the evaluation of the area.

Study Area

Richfield is one of four neighbourhood units comprising the community of Millbourne in the Mill Woods Outline Plan area (Figure 24). It is bounded on the west by 91st Street, on the south by 34th Avenue and on the north and east by Mill Woods Road. In September 1970, the first development or service agreement approved in Mill Woods

FIGURE 24

MILLBOURNE COMMUNITY



was for the Richfield subdivision,[21] and in June 1977, the Neighbourhood Outline Plan for Richfield received approval from the Municipal Planning Commission.[22] By the spring of 1978, development in the area had almost been completed following the general guidelines proposed by the outline plan.

The Richfield neighbourhood comprises some 213 acres of land and will house a projected population of approximately 4350 people with a density of 20.4 persons per gross acre or 37.8 persons per net acre when completely developed.[23] At present, the population of Richfield is 3480 people,[24] with a density of 15.5 persons per gross acre or 28.4 persons per net acre.[25] Table 1 shows the amount of land allocated to the various land uses in the neighbourhood, while Table 2 shows the population and densities accommodated by the different housing types. As indicated on Table 1, the greatest amount of land is allocated to single-detached housing and the circulation

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[21] City of Edmonton, Planning Department, Terms of Reference for Developers Agreements, July 17, 1972.

[22] City of Edmonton, Planning Department, Subdivision Status Report, November, 1978.

[23] City of Edmonton, Planning Department, Final Computation Data for Richfield, Working Paper, February 1, 1977.

[24] City of Edmonton, Civic Census, 1978.

[25] City of Edmonton Planning Department, Gross and Net Density in Selected Suburban Areas, Edmonton, 1977, General Plan Review, 1978.

TABLE 1 - LAND USES IN RICHFIELD

Parcels	Zoning	Acres	Percent
427	R-1 One Family	71.03	33.29
48	R-2 Two Family	4.84	2.26
1	R-2 Six Units	0.50	0.23
1	R-3 Fourplex	0.20	0.09
2	R-3 Apartments	5.68	2.66
6	R-2A Row Housing	17.53	8.22
1	R-2A Zero Lot Line	3.40	1.59
1	CD-1 Row Housing	0.64	0.30
1	P-2 Nursing Home	2.47	1.16
4	P-3 Community Housing	11.17	5.24
1	P-1 Church	0.97	0.46
1	One Public Elementary School	8.54	4.00
2	One Separate Elementary School	7.00	3.28
4	Neighourhood Parks	8.49	4.00
	Circulation	70.88	33.22
		213.34	100.00

Source: City of Edmonton, Planning Department, Final Computation Data For Richfield, Working Paper, Feburary 1, 1977.

TABLE 2 - POPULATION AND DENSITIES IN RICHFIELD

Zoning	Net Acres	Units Per Acre	Units	Persons Per Acre	Population
R-1 One Family	71.03	6.01	427	3.79	1,618
R-2 Two Family	5.34	10.11	54	4.01	217
R-3 Fourplex	0.20	20.00	4	4.01	16
R-3 Apartments	5.68	25.00	142	2.08	295
R-2A Row Housing	17.53	17.00	298	3.97	1,183
R-2A Zero Lot Line	3.40	14.41	49	3.79	186
CD-1 Row Housing	0.64	14.06	9	2.08	19
P-3 Community Housing	11.17	17.00	190	4.30	817
TOTALS	114.99		1,173		4,351

Source: City of Edmonton, Planning Department, Final Computation Data for Richfield, Working Paper, February 1, 1977.

system which includes the pedestrian walkways. Table 2 indicates that when all the land required for row housing is combined it is less than one-third that required for single-detached housing to accommodate approximately the same population. In view of the trend towards higher land and servicing costs, it could be argued that a possible direction for accommodating future urban growth should be provided by higher density forms of housing. This is the direction which Edmonton's planners have taken, as is evidenced by the increase in multiple family types of housing in all of the new residential expansion areas in Edmonton. However, the public's reaction to higher densities in new suburban areas has not altogether been positive. As will be seen shortly, multiple family housing was the greatest source of dissatisfaction among residents of the Richfield Neighbourhood Unit.

Method of Inquiry

The method of inquiry was to conduct intensive personal questionnaire interviews with a systematic random sample of the residents of the Richfield Neighbourhood Unit.[26] A total of 196 interviews were attempted and

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[26] See Appendix 'A' for Questionnaire.

169 were completed, providing a response rate of 86 per cent. The sample distribution represented a cross-section of respondents including those living in single-detached housing, duplexes, walkup apartments, and row housing. Figure 25 illustrates the areal distribution of households in the sample.

The interviews were conducted in February and March, 1978, each interview lasting on the average 30 minutes. The person interviewed was either the husband or wife,[27] or one of the principal tenants.[28] The boundaries of the neighbourhood were defined by a map, and it was pointed out to each person interviewed that the neighbourhood included only that area outline in red on the map.

The questionnaire interview was selected for use in this study for three reasons. First, it permitted residents to evaluate their neighbourhood in a fairly straightforward manner. Second, because of the comparative nature

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[27] In some interviews, both members contributed and some interviews involved a single-parent household.

[28] Anyone who shared in the rent paying.

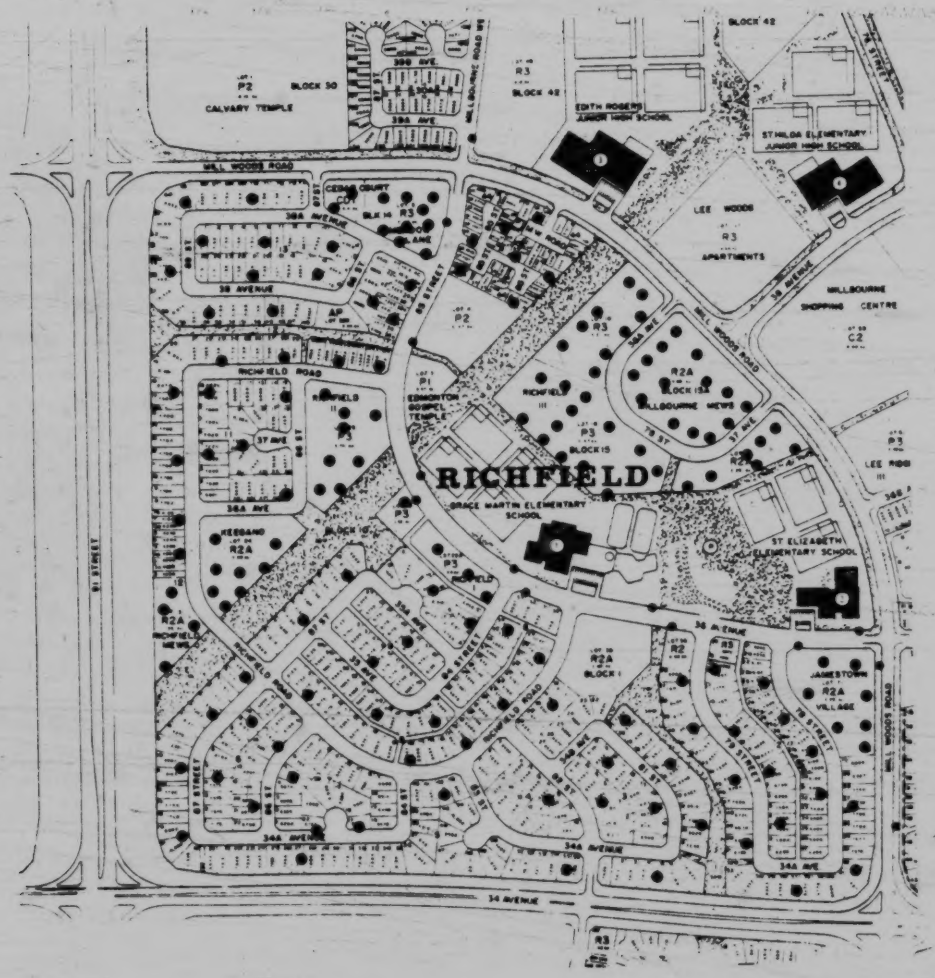

FIGURE 25

SAMPLE DISTRIBUTION-RICHFIELD

N

0 500 FT

● HOUSEHOLD INTERVIEWED

Source: Fieldwork, Spring 1978

of the study and third, it permitted investigation of a variety of topics and did not demand an extremely skillfull interviewer. Moser commented on the use of the formal interviewing technique when he said:

> The case for formal interviewing is simple. Only if all respondents are asked exactly the same questions in the same order can one be sure that all the answers relate to the same thing and are strictly comparable. Then, and then only is one justified in combining the results into statistical aggregates. Without doubt, formal interviewing succeeds in achieving higher reliability than informal techniques.[29]

There are however, two basic problems associated with the questionnaire method employed in conducting this research. First is the difficult problem of the temporal stability of the identified neighbourhood preferences. Second are the limitations in the interpretation of the preferences, since they are functionally related to current residential satisfaction.[30] This research however assumes

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[29] C. A. Moser, Survey Methods in Social Investigation, Heinemann, London, 1963, p. 204.

[30] Studies of residential behavior using a classic "before" and "after" design have been infrequent in large part because of difficulty of selecting an appropriate "before" sample of persons who would be moving into the residential setting under investigation. Gans was able to collect data from a sample of the Levittown residents before their move, for example with the co-operation of the developer who mailed a questionnaire to families who had bought but not yet moved in.
H. J. Gans, The Levittowners, New York, Random House, 1967.

that responses of a household expressing current satisfaction with neighbourhood features are more reliable indicators of neighbourhood preferences, than hypothetically phrased preference questions often posed to those without knowledge and experience of the alternatives.

The questionnaire consisted of three distinct sets of questions. The first set consisted of the socioeconomic and demographic characteristics of the sample population. The second set was designed to determine the residents' "likes" and "dislikes" for the neighbourhood, while the third set included a series of attitude scales which were used to measure residents' satisfaction with planning objectives for the neighbourhood. A systematic sampling technique was applied because it was imperative to the study that all housing types were represented from all locations within the area. According to Hammond et al, a systematic sample gives a more uniform cover of the population, for random samples tend to include clusters and leave gaps unless the random sample is very large.[31]

Socioeconomic and Demographic Characteristics

From the total number of 169 persons interviewed, 117 were female, while 52 were male. The disproportionate

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31 R. Hammond et al., Quantitative Techniques in Geography: An Introduction, Clarendon Press, Oxford, 1974, p. 114.

number of females interviewed stemmed from the fact that most of the interviewing took place during the daytime on weekdays, while the male member of the household was at his place of work. It was observed however, that even when both members of the household were at home, the female members appeared more cooperative in responding to the questions than the males. Furthermore, females generally appeared more familiar with the neighbourhood than males. This seems reasonable, since females and especially married females with children would tend to spend more of their time in the neighbourhood, while more of the married male's time is centered around his place of work.

Generally, the sample was comprised of young married couples with children, which is comparable to the Mill Woods area as a whole.[32] In fact, approximately 75 per cent of the total sample were under 40 years of age. However, ages ranged from 17 years to 68 years old, with the greatest number being in the 25-29 age group. In the total sample, 138 persons were married and there were 133 households with children under 18 years of age that were living at home. This generated a total of

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[32] In 1976, in the entire Mill Woods area, 81 per cent of the population were 34 years and under, the largest percentage being in the 20-34 age category. Also, 6825 were married and 6230 were single. In 1976, in the Richfield neighbourhood, 63 per cent of the population were 34 years and under.
Statistics Canada, Census of Canada, 1976.

276 children under 18 years of age living at home. Hence the total sample showed that there were 1.63 children per household and 2.08 children per household for households interviewed with children. Furthermore, there were 112 households with pre-school and/or elementary school age children which generated a total of 226 pre-school and elementary school age children.[33]

Education levels ranged from those who had attained grade 8 or less, to those who had attained a graduate degree, with the greatest number being in the grades 9-12 category. The type of employment that the greatest number of persons were engaged in was homemaking activities, since the largest proportion of the sample interviewed were married females staying at home. The second greatest number consisted of those people engaged in professionally related activities.

Length of residence in the neighbourhood ranged from less than 6 months to more than 3 years, with the greatest number having lived in the neighbourhood more than 3 years. The greatest percentage (28%) of people who had moved into the neighbourhood came from outside the city. The second

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[33] In 1976, in the entire Mill Woods area, the average number of persons per household was 3.5. Also, in 1976 85 per cent of the total number of children were 14 years and under.
Statistics Canada, Census of Canada, 1976.

greatest percentage (6.5%) were from the adjacent area in south central Edmonton.[34]

The number of persons who owned their homes as opposed to renting was divided about equally, there being 83 owners and 86 renters.[35] The type of housing divided into four classes: single-detached housing, duplexes, walkup apartments, and row housing. As indicated on Table 3, single-detached housing constituted the greatest share of the sample. It is also apparent from Table 3 that single-detached housing and duplexes were over-represented, while row housing was under-represented.

The average number of automobiles owned and operated by people in the neighbourhood was 1.49 per household. However, it was considerably lower for people living in public housing, the average number being 0.83 per household. This points to two important factors for that portion of the population living in public housing, namely the provision of conveniently located service facilities and the provision of a good public transportation system.

Total family incomes ranged from under $2,000 per annum to over $35,000 per annum, the median incomes falling

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[34] Of the total number of moves into the entire Mill Woods area, 39 per cent were from outside the city. Statistics Canada, Census of Canada, 1976.

[35] In the entire Mill Woods area in 1976, there were 3,070 owners and 705 renters. Statistics Canada, Census of Canada, 1976.

in the $20,000 - $22,499 range.[36] The lowest incomes, as expected, were for those families living in public housing, while the highest were for those living in single-detached housing.

TABLE 3 - TYPE OF HOUSING OCCUPIED

Type of Housing	Sample		Richfield[37]	
	Number	Percent	Number	Percent
Single-detached	73	43.2	427	36.4
Row Housing	64	37.9	546	46.5
Walkup Apartments	18	10.6	142	12.0
Duplexes	14	8.3	54	4.6
TOTALS	169	100.00	1169	99.5[38]

Source: Questionnaire Survey, Winter, 1978.

[36] In 1976, the median income per household for Richfield was between $17,500 - $19,999. Statistics Canada, Census of Canada, 1976.

[37] City of Edmonton, Planning Department, Final Computation Data for Richfield, Working Paper, February 1, 1977.

[38] Four Units (0.5%) of Fourplexes had not yet been built.

RESIDENTS' EVALUATION OF THE NEIGHBOURHOOD

This section presents an assessment of people's overall responses to the neighbourhood. It begins with an analysis of the things that residents "liked" and "disliked" about the neighbourhood and concludes with their satisfaction and dissatisfaction with planning objectives for the neighbourhood.

Things Residents Liked About Living in the Neighbourhood

Residents were asked, "what are some of the things you like about living in this neighbourhood", and to rank what they considered to be the three most important.[39] From the ranked responses, a number of common factors emerged. Those that constituted the number one rankings were: design, accessibility, proximity, quiet, dwelling, economic, social, suburban, and privacy. As shown on Table 4, the factor that was ranked number one most often was the "proximity" factor, followed by the "social" factor and the "quiet" factor. Among the responses related to the "proximity" factor that were mentioned most often were: close to place of work, close to elementary schools, and close to grocery stores. As shown on Table 5, "close

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39 See Appendix B for the ranked responses and the factors representing these responses.

to place of work" was mentioned most often.

TABLE 4 - THINGS RESIDENTS LIKED ABOUT LIVING IN THE NEIGHBOURHOOD, NUMBER 1 RANKINGS, n = 160

Factor	Number of Respondents	Percent
Proximity	41	25.6
Social	35	21.9
Quiet	29	18.1
TOTALS	105	65.6

Source: Questionnaire Survey, Winter, 1978

TABLE 5 - PROXIMITY-RELATED RESPONSES, n = 129

Response	Number of Respondents	Percent
Close to Place of Work	39	30.2
Close to Elementary Schools	36	27.9
Close to Grocery Stores	33	25.6
TOTALS	108	83.7

Source: Questionnaire Survey, Winter, 1978

The factors that constituted the number two rankings were identical to those in number one with the exception that a "service" factor was substituted for the "privacy" factor. As shown on Table 6 the factor that was ranked number two most often, again was the "proximity" factor, followed by the "social" factor, and the "quiet" factor which both had the same number of responses.

TABLE 6 - THINGS RESIDENTS LIKED ABOUT LIVING IN THE NEIGHBOURHOOD, NUMBER 2 RANKINGS, n = 139

Factor	Number of Respondents	Percent
Proximity	43	30.9
Social	23	16.5
Quiet	23	16.5
TOTALS	89	63.9

Source: Questionnaire Survey, Winter, 1978

As shown on Table 7, close to place of work, again was mentioned most often, followed by close to elementary schools and close to grocery stores.

Finally, the factors that constituted the number three rankings were again identical to the number one, with the exception that a "service" factor was substituted for the

"dwelling" factor. As shown on Table 8, the factor that was ranked number three most often once again, was the "proximity" factor, followed by the "quiet" factor and the "social" factor both having the same number of responses.

TABLE 7 - PROXIMITY-RELATED RESPONSES, n = 117

Response	Number of Respondents	Percent
Close to Place of Work	39	33.3
Close to Elementary Schools	22	18.8
Close to Grocery Stores	17	14.5
TOTALS	78	66.6

Source: Questionnaire Survey, Winter, 1978.

TABLE 8 - THINGS RESIDENTS LIKED ABOUT LIVING IN THE NEIGHBOURHOOD, NUMBER 3 RANKINGS, n = 86

Factor	Number of Respondents	Percent
Proximity	25	29.1
Social	16	18.6
Quiet	16	18.6
TOTALS	57	66.3

Source: Questionnaire Survey, Winter, 1978.

As shown on Table 9, close to downtown Edmonton was mentioned most often followed by, close to elementary schools and close to grocery stores.

TABLE 9 - PROXIMITY-RELATED RESPONSES, n = 70

Response	Number of Respondents	Percent
Close to downtown Edmonton	20	28.6
Close to Elementary Schools	14	20.0
Close to Grocery Stores	10	14.3
TOTALS	44	62.9

Source: Questionnaire Survey, Winter, 1978.

The results of this research indicate that Edmonton planners have satisfied the residents need for proximity by locating certain essential facilities, such as elementary schools and grocery stores, near most of the housing units. It also indicates that there is an anomaly in the residents' distorted perception of distance. It is apparent that Mill Woods is neither close to downtown Edmonton nor to other major employment centres in the city. This suggests that residents may have confused proximity with accessibility, since many residents reported having good access to all parts of the city.

Similar findings were reported by Lansing et al in

their study of ten communities in the United States. They found that in all of the communities tested, proximity was mentioned often as a source of satisfaction with the community.[40] They also found that the neighbourhood's maintenance level, the friendliness and the similarity of the neighbours and the neighbourhood noise level were important contributers to satisfaction.[41]

Shaw had similar results when he compared the environmental satisfaction of residents in the planned resource community of Kitimat, British Columbia with that of residents in the unplanned resource town of Kimberley, British Columbia. He found that the most important factors contributing to environmental satisfaction in the two communities were: accessibility to schools and shops, friendly neighbours, cleanliness and quietness.[42]

In his work in Levittown, Gans found that socially-related factors were important as a source of neighbourhood satisfaction. He found that shared attitudes about child rearing and life style and generalized compatibility were

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[40] J. Lansing, Marans and Zehner, Planned Residential Environments, Ann Arbor, University of Michigan, Institute for Social Research, 1970.

[41] Ibid.

[42] W. G. A. Shaw, Evolutions of Resource Towns: Planned and Unplanned, unpublished M.A. thesis, University of Alberta, Edmonton, 1970.

important for neighbourhood satisfaction.[43] Similar findings were reported by Keller[44] and by Michelson,[45] who also suggested that sociability and perceived similarities with neighbours are central to neighbourhood satisfaction. However, Gutman claims that little is known about what characteristics must be shared before people feel themselves to be compatible with others. In his words:

> It is not known for certain if they must have common backgrounds, or similar interests or shared values, or combinations of these. Nor is it known precisely which background characteristics, behavior patterns and interests are most and least important or about what issues or values must be shared.[46]

Things Residents Disliked About Living in the Neighbourhood

This section deals with things residents disliked about living in the neighbourhood. They were asked, "what are some of the things you dislike about living in this neighbourhood" and to rank what they considered to be the

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[43] H. J. Gans, The Levittowners, New York, Random House, 1967, pp. 153-184.

[44] S. Keller, The Urban Neighbourhood: A Sociological Perspective, New York: Random House, 1968, pp. 106-123, 149-164.

[45] W. Michelson, Man and His Urban Environment: A Sociological Approach, Reading, Addison-Wesley, 1970, pp. 168-190.

[46] R. Gutman, "Site Planning and Social Behavior", Journal of Social Issues, Vol. 22, No. 4, October, 1966, pp. 103-115.

three most important.[47] From the ranked responses, a number of common factors emerged. Those that constituted the number one rankings were: design, facility, isolation, social, service, maintenance, dwelling and aesthetic. As shown on Table 10, the factor that was ranked number one most often was the "design" factor, followed by the "facility" factor and the "social" factor.

TABLE 10 - THINGS RESIDENTS DISLIKED ABOUT LIVING IN THE NEIGHBOURHOOD, NUMBER 1 RANKINGS, n = 135

Factor	Number of Respondents	Percent
Design	50	37.0
Facility	35	25.9
Social	23	17.0
TOTALS	57	66.3

Source: Questionnaire Survey, Winter, 1978.

Among the responses related to the "design" factor that were mentioned most often as sources of dislike for the neighbourhood were: too much multi-family housing, confusing street layout, and public housing is too concentrated. As shown on Table 11, too much multi-family

[47] See Appendix 'C' for the ranked responses and the factors representing these responses.

housing was mentioned most often (Plates 9 and 10).

TABLE 11 - DESIGN-RELATED RESPONSES, n = 126

Response	Number of Respondents	Percent
Too much Multi-Family Housing	55	43.6
Confusing Street Layout	33	26.3
Public Housing too Concentrated	20	15.9
TOTALS	108	85.8

Source: Questionnaire Survey, Winter, 1978.

TABLE 12 - THINGS RESIDENTS DISLIKED ABOUT LIVING IN THE NEIGHBOURHOOD, NUMBER 2 RANKINGS, n = 101

Factor	Number of Respondents	Percent
Design	32	31.7
Facility	31	30.7
Social	22	21.8
TOTALS	85	84.2

Source: Questionnaire Survey, Winter, 1978.

The factors that constituted the number two rankings were identical to the number one. As shown on Table 12

Plate 9

Multiple Family Housing in Richfield

Plate 10

Public Housing in Richfield

the factor that was ranked number two most often, again was the "design" factor, followed by the "facility" factor and the "social" factor. Among the responses related to the "design" factor that were mentioned most often as sources of dislike for the neighbourhood were: too much multi-family housing, lack of leisure park space, and confusing street layout. As shown on Table 13, too much multi-family housing, again was mentioned most often.

TABLE 13 - DESIGN-RELATED RESPONSES, n = 96

Response	Number of Respondents	Percent
Too Much Multi-Family Housing	23	23.9
Confusing Street Layout	18	18.8
Lack of Leisure Park Space	15	15.6
TOTALS	56	58.3

Source: Questionnaire Survey, Winter, 1978.

The factors that constituted the number three rankings were, again identical to the number one. As shown on Table 14, the factor that was ranked number three most often was the "facility" factor, followed by the "design" and the "maintenance" factor.

TABLE 14 - THINGS RESIDENTS DISLIKED ABOUT LIVING IN THE NEIGHBOURHOOD, NUMBER 3 RANKINGS, n = 61

Factor	Number of Respondents	Percent
Facility	23	37.7
Design	17	27.9
Maintenance	7	11.5
TOTALS	47	77.1

Source: Questionnaire Survey, Winter, 1978.

TABLE 15 - FACILITY-RELATED RESPONSES, n = 58

Response	Number of Respondents	Percent
Lack of a Junior High School	14	24.1
Lack of a Senior High School	10	17.2
Lack of a Large Multi-Purpose Shopping Facility	9	15.5
TOTALS	33	56.8

Source: Questionnaire Survey, Winter, 1978.

Among the responses related to the "facility" factor that were mentioned most often as sources of dislike for the neighbourhood were: lack of a junior high school,

lack of a senior high school, and lack of a large multi-purpose shopping facility. As shown on Table 15, lack of a junior high school was mentioned most often.

Similar results were also reported by Lansing et al. For example, they found that satisfaction was higher in the least dense neighbourhoods and noticeably lower in the most dense neighbourhoods.[48] They also found that the proportions of residents who reported the least satisfaction with their neighbourhood were found when, the nearby play facilities for children were poor; when the neighbourhood was relatively noisy; when there was too little space for family activities; and, when neighbours were heard very often.[49] They concluded that the preference for low density seemed to arise out of needs for privacy, quiet, and outdoor needs, which were met in varying degrees by different site arrangements.[50]

SATISFACTION WITH PLANNING OBJECTIVES FOR THE NEIGHBOURHOOD

This section examines the residents' satisfaction with planning objectives for the neighbourhood. Residents

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[48] J. Lansing, Marans and Zehner, Planned Residential Environments, Ann Arbor, University of Michigan, Institute for Social Research, 1970.

[49] Ibid.

[50] Ibid.

were asked to rate certain features on a five-point scale ranging from very satisfied to very dissatisfied. The features related directly to planning objectives for the neighbourhood and included: location of elementary schools, location of grocery stores, provision of public bus service, provision of outdoor play areas for children, provision of public recreation facilities, privacy available around the dwelling unit, and the provision of pedestrian walkways.

Location of Elementary Schools

There are two elementary schools located in the Richfield Neighbourhood unit. The Grace Martin Public Elementary School is located at the approximate geographic centre of the unit, while the St. Elizabeth Separate Elementary School is located at the fringe of the unit. Children from the concentration of high density housing do not have to cross any major roadways enroute to the elementary schools while those from the low density single-detached housing area must cross a major collector roadway, 85th Street and 36th Avenue.

From the total sample of 169 people interviewed, 129 (76.3%) were satisfied with the location of the elementary schools. More important however were the responses of the households with pre-school and elementary school age

children. From the total of 112 households interviewed, 100 (89.3%) reported being satisfied with the location of elementary schools.

Location of Grocery Stores

There are no grocery shopping facilities located within the Richfield Neighbourhood Unit. However, there are two shopping centres in close proximity, namely, the Lee Ridge Shopping Centre, a small convenience neighbourhood facility and the Millbourne Shopping Centre, a large neighbourhood facility. The major tenant in the Lee Ridge Shopping Centre is a small convenience grocery store, the Red Rooster, while the major tenant in the Millbourne Shopping Centre is a large supermarket, Canada Safeway.

From the total of 169 people interviewed, 118 (69.8%) did their grocery shopping at the Millbourne Safeway, 14 (8.3%) at Woodward's Southgate and 37 (21.9%) at some other grocery shopping facility. Furthermore, 132 (78.6%) people reported that they would not shop at the Lee Ridge Shopping Centre because goods were too expensive, while 17 (10.1%) claimed there was not enough selection and 19 (11.3%) had some other reason, such as lack of space for parking, store was too small and cramped, had an unclean appearance, and there were always too many kids "hanging around" the store. However, almost all of the people

interviewed were satisfied with the location of the grocery stores. In fact, 166 (98.2%) reported being satisfied.

Public Bus Service

The bus servicing the Richfield Neighbourhood Unit enters via 85th Street, proceeds southbound, exits at 36th Avenue and proceeds southbound along Mill Woods Road at the periphery of the neighbourhood.

Most people were satisfied with the public bus service near their home. From the total, 131 (77.5%) reported being satisfied, while only 10 (5.9%) were dissatisfied.

Outdoor Play Areas For Children

Outdoor play areas for children meant, areas within close proximity of dwelling units where parents could supervise their children through visual and verbal contact. The question was primarily intended for those households with elementary school age and pre-school children.

People were generally less satisfied with the outdoor play areas for children. From the total sample of 169 people interviewed, 74 (43.8%) reported being satisfied, while 65 (38.5%) were dissatisfied. More important however, were the responses of those households with elementary school age and pre-school children. From the total number of responses, 60 (53.6%) reported being satisfied

while 49 (43.8%) were dissatisfied. Furthermore, people living in row housing with elementary school age and pre-school children were less satisfied with outdoor play areas for their children than were those living in other housing types. A total of 24 (53.3%) reported being dissatisfied while 21 (46.7%) were satisfied.

Public Recreation Facilities

The playing fields and outdoor skating rinks associated with the elementary schools were the only source of public recreation facilities in the neighbourhood. Hence, lack of public recreation facilities was one of the greatest sources of dissatisfaction among the residents of the neighbourhood. From the total number of responses, 87 (51.5%) reported being dissatisfied, while only 48 (28.4%) were satisfied. Furthermore, households with children were just as dissatisfied with the public recreation facilities as households without children. From the total number of responses, 71 (53%) households with children were dissatisfied, while only 40 (30%) were satisfied. Similarly, 16 (44.5%) households without children were dissatisfied, while only 8 (22.2%) were satisfied.

Privacy Around Dwelling Unit

Privacy around dwelling unit meant, that outdoor space

associated with the individual dwelling unit where residents could feel they were not being intruded upon or were intruding upon neighbours or passers-by. From the total sample of 169 people interviewed, 117 (69.2%) reported being satisfied, while 48 (28.4%) were dissatisfied.

However, a different picture emerges when people living in different housing types are examined. For example, owners were far more satisfied with the privacy available to them around their dwelling unit than were renters. From the total number of responses, 67 (80.7%) owners were satisfied, while only 13 (15.6%) were dissatisfied. For renters, 50 (58%) were satisfied, while 35 (40.7%) were dissatisfied.

This relationship between owners and renters is reflected in the type of housing occupied, since most owners lived in single-detached housing or duplexes where private outdoor space was available, while most renters lived in row housing or walkup apartments where this space was limited or non-existent. Consequently, those people living in row housing and walkup apartments were far more dissatisfied with the privacy available to them around their dwelling unit than were those people living in single-detached housing and duplexes.

For example, 62 (84.9%) people living in single-detached housing were satisfied with the privacy available to them around their dwelling unit, while only 9 (12.3%)

were dissatisfied. For people living in duplexes, 11 (78.6%) were satisfied with the privacy available to them around their dwelling unit, while only 2 (14.2%) were dissatisfied. For people living in walkup apartments, 11 (61.1%) were satisfied with the privacy available to them around their dwelling unit, while 7 (38.9%) were dissatisfied. Finally, for people living in row housing, 33 (51.6%) were satisfied with the privacy available to them around their dwelling unit, while 30 (46.9%) were dissatisfied.

Pedestrian Walkways

Pedestrian walkways, as previously mentioned, were a new design innovation incorporated into all outline plan areas. Their major function, as an extension of the public transportation system, was to provide safe and convenient access to district, community, and neighbourhood facilities by emphasizing the separation of vehicle and pedestrian. In Richfield, a gas transmission pipeline traverses the neighbourhood from northeast to southwest. Since this has effectively "frozen" development for 50 feet on either side of the pipeline, the strip of land rather than being wasted, was utilized as the major pedestrian walkway for the neighbourhood. Branching from this main spinal walkway are minor walkways extending into the housing masses

and focussing on the elementary schools of the neighbourhood.

Most people were satisfied with the pedestrian walkways in the neighbourhood. From the total number of responses, 126 (74.6%) were satisfied, while only 15 (8.9%) were dissatisfied. Furthermore, those who were dissatisfied, were more dissatisfied with the maintenance on the walkways rather than the walkways themselves.

CONCLUSION

The primary objective of this chapter was to present a general description of the Mill Woods Outline Plan area, as an example of large scale planning and development, and then to focus on one of its neighbourhoods as a means of identifying those features which residents felt constituted a satisfactory living environment. It was important to present the entire Mill Woods area first, in order to provide the setting for a more detailed analysis of the Richfield Neighbourhood Unit.

The study identified a number of factors which residents expressed as being important in providing for a satisfactory living environment. Those mentioned most often were: proximity, social and quiet factors. Proximity, the factor mentioned most often was expressed in terms of nearness to place of work, to elementary schools,

and to grocery shopping facilities. Other sources of satisfaction were, the public bus service and the purposely designed pedestrian walkways.

The study also identified factors that caused dissatisfaction among neighbourhood residents. Those mentioned most often were: design, facility, and social factors. Design, the factor mentioned most often as a source of dissatisfaction, was expressed in terms of too much multi-family housing, confusing street layout, and public housing too concentrated. Although residents were generally satisfied with the outdoor play areas for children, those living in row housing with young children were dissatisfied. Also, residents were generally satisfied with the privacy available to them around their dwelling unit, except for those living in row housing and walkup apartments. Finally, besides too much multi-family housing, lack of public recreation facilities was one of the greatest sources of dissatisfaction among the residents of the neighbourhood.

This study pointed out the importance of identifying factors which cause satisfaction and dissatisfaction, in order to create a living environment that is sensitive to the needs and expectations of its residents. It also stressed the importance of identifying various sub-groups within the population, such as those in different stages of the life-cycle. For example, the study indicated that

households with children have different needs than those without children. Furthermore it stressed the importance of including people living in different housing types, such as single-detached and row housing. This is particularly important, since there has been a noticeable trend in recent years to an increase in multi-family type accommodation in all new residential areas. With this information available, planners could design neighbourhoods that are more consistent with the values and desires of residents and not necessarily those of the planners.

CHAPTER 5

CONCLUSIONS

The organizing concept for this thesis was focussed on three objectives. The first was to describe the changes that occurred in residential planning in Edmonton from 1950 to 1976. The second objective was to explain these changes, while the third was devoted to a resident evaluation of the Richfield Neighbourhood Unit in Mill Woods.

A change in scale from planning units of neighbourhood size to much larger units termed outline plan areas marked the beginning of major changes in philosophy towards residential planning in Edmonton. The intent of this concluding chapter is, first, to examine why this change occurred and the extent to which Edmonton planners re-evaluated the adequacy of neighbourhood unit planning. Second, the conclusions of a post-plan evaluation are presented, based on residents' satisfaction with the Richfield Neighbourhood Unit, and, third, suggestions are offered about the ways the methods employed in the neighbourhood study could be used by planners to evaluate the effectiveness of their designs.

POST-PLAN EVALUATION

Post-plan evaluations provide planners with essential insight into the success with which planning concepts have withstood the test of time. Until such evaluations are conducted, planners have little substantial evidence upon which to assess the full consequences of their concepts and the influence they impose on the existing physical and social structure of an urban area. Hence, post-plan evaluations are a vital base upon which to build future plans.

Re-Evaluation of Neighbourhood Unit Planning

During the 1950s, Perry's 'Neighbourhood Unit Concept' was used as the model for residential design in Edmonton. Beginning about 1960, however, this model was no longer followed so closely in the design of new residential areas, as Edmonton's planners shifted to the Outline Plan Concept of schematic planning for much larger areas of suburban land. Accompanying this change in scale was the application of a larger and more complex hierarchical arrangement of service facilities. Intuitively, planners felt that the services provided at the neighbourhood level were no longer adequate to meet the needs of a much larger population. Furthermore, changes in marketing behavior, along with

increased mobility and new technology in convenience marketing, reinforced the change to larger scale planning units. It was realized, therefore, that individual neighbourhood units could not be designed in isolation, and that the neighbourhood was not necessarily a self-contained service unit for even low-order retailing.

It can be concluded therefore that the change to large scale planning units was based more on perceived inadequacies with the Neighbourhood Unit Concept than on any careful re-evaluation of the concept itself. However, these inadequacies were never clearly outlined, and it can only be assumed that the change to large scale planning was based primarily on the fact that planners perceived the outline plan to be a more effective community service area, particularly in terms of the hierarchical organization of school and retail facilities. Furthermore, it can be assumed that planners considered the outline plan to present a more orderly approach to future growth, particularly in the sense of being able to foresee more economical extensions to public utilities and roadways.

At the same time, however, it is questionable whether Edmonton's planners fully understand the complexities of the hierarchies they employ. For example, how useful are their hierarchies in explaining complex behavior patterns of residents? Also, how adaptable are their hierarchies in terms of accommodating changing needs and preferences?

Such questions can be answered only by inference, but the fact that there is no evidence that the planners have even seen the importance of asking the questions themselves is most revealing. Unfortunately, it is not enough that a planner's sense of order should be satisfied; an artificial order which has no correspondence with actual behavior patterns has little practical utility.

EVALUATION OF THE RICHFIELD NEIGHBOURHOOD UNIT

Traditionally, neighbourhood planning concerned itself with features such as the street pattern, landscaping, housing arrangement, and the distribution of various services and facilities. These elements are normally presented as "encouraging" or "discouraging" certain patterns of behavior among residents, or as contributing to any of a number of attitudinal characteristics, from a sense of security to one of relaxation.[1]

A neighbourhood of high quality was defined by Ermuth as one that conveys a sense of well-being and satisfaction to its population through values that may be:

1. physical, such as accessibility to essential facilities and good means of spatial mobility,
2. non-utilitarian amenities, such as

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[1] K. Lynch, Site Planning, Cambridge, Mass., M.I.T. Press, 1971.

aesthetics, quietness, privacy and safety and,

3. social and symbolic values such as status, prestige, autonomy, sociability and sense of identity.[2]

Furthermore, the identification of values is fundamental to the formulation of goals in the planning process. Altshuler elaborates on the importance of this when he says that "it is impossible to plan without some sense of community goals,"[3] while Chapin considers the first step in land use planning analyses to be the identification of mass and group values.[4] It is the aim of this section to discover what constitutes a satisfactory living environment and what factors are considered by residents to be the most important. A comparison will be made between neighbourhoods planned during the 1950s and the 1970s, so that significant differences can be identified.

The Neighbourhood in the 1950s

During the 1950s, most neighbourhoods contained primarily single-detached dwellings at densities of 12 to

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[2] F. Ermuth, Residential Satisfaction and Urban Environmental Preferences, Downsview: Atkinson College, Geographical Monograph No. 3, 1974, p. 1.

[3] A. Altshuler, The City Planning Process, Cornell University Press, Ithaca, New York, 1965, p. 300.

[4] S. Chapin Jr., Urban Land Use Planning, University of Illinois Press, Urbana, 2nd ed., 1965, p. 37.

15 persons per gross acre. The neighbourhoods of Sherbrooke and Dovercourt are typical of this period. In analyzing them it is worth noting that:

1. The neighbourhoods are organized around a central elementary school and park site.

2. There are limited amounts of multi-family housing, but they include duplexes, town houses and walkup apartments.

3. What multi-family housing there is, is generally located near the centre of the neighbourhood, close to the elementary school/park site.

4. In Sherbrooke, there is one concentration of walkup apartments along the arterial that forms the southern boundary of the neighbourhood. It does not focus inward on the neighbourhood but forms an isolated buffer zone.

5. There are numerous small ornamental parks scattered throughout the two neighbourhoods.

6. The elementary school/park site has considerable street frontage and therefore is fairly visible.

7. Each neighbourhood has clearly identifiable boundaries formed by arterial roadways.

8. Commercial retailing was first planned to be located near the centre of each neighbourhood. However, this was later changed and shopping facilities were actually developed on the periphery of each neighbourhood at the intersection of arterial roadways.

The Neighbourhood in the 1970s

Neighbourhoods planned during the 1970s have been significantly altered from those planned during the 1950s. Increase in land, servicing, and construction costs have caused the development industry to produce increasing quantities of higher density housing forms such as small lots for detached units, semi-detached units, townhousing, walkup apartments, and high rises. Hence, based on the density guidelines of the General Plan,[5] the outlying areas are being developed as mixed neighbourhoods with densities of 20 to 24 persons per gross acre. As a result, new neighbourhoods are developing at densities almost twice those of the early 1950s.

Typical of the neighbourhoods planned over the past few years are those in the Mill Woods Outline Plan area. In analyzing the Richfield Neighbourhood Unit, there are several significant points of contrast and similarity with Sherbrooke and Dovercourt:

1. In Richfield, a full range of housing types is provided. At a density of 20 to 22 persons per gross acre, the mix of units is approximately 50% single-detached, 35% duplexes and row housing, and 15% walkup apartments. The multi-family housing forms comprise 50% of the total number of units.

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5 City of Edmonton, General Plan, August, 1967, p. 5.2.

2. In Richfield, the elementary school/park site is still consolidated in the centre of the neighbourhood. The city and the Public and Separate School Boards have been operating under a joint use agreement whereby land savings result from the overlapping use of parks, playfields, schools and community league buildings.

3. Because of this policy, the central elementary school/park site in Richfield is large and there are no smaller parks dispersed throughout the neighbourhood unit.

4. In Richfield, the elementary school/park site has less street frontage. This is complicated further since the access requirements for the school has forced the park off the frontage, reducing its visibility.

5. Richfield is more inward oriented. Based on transportation criteria, access is restricted to many of the adjacent roads. The city has opted for double-fronting lots rather than providing service roads to adjacent residences. Consequently, there is little multi-family development at the edges of the neighbourhood unit, except at the entrances of internal roadways.

6. Consistent with city policy, in Richfield, sufficient public housing has been provided to house 5% of the population of the neighbourhood. There are two large public housing sites in Richfield.

7. Based on the principle of locating the multi-family housing adjacent to amenities such as schools, parks, community league facilities, and public transit routes, the multi-family housing in Richfield tends to be concentrated in the centre of the neighbourhood unit surrounding the elementary school/park areas.

The residents' responses to the Richfield Neighbourhood Unit were not altogether positive. For example, the dissatisfaction mentioned most often was the amount of multi-family housing in the neighbourhood. This dissatisfaction seemed to stem from the perception of a more crowded, less private, and less attractive environment; increased competition for the use of limited community facilties; and, increased social conflict resulting from a greater diversity in household composition, lifestyle, type of tenure, and differences in income of the neighbourhood population.

Edmonton planners consider that one of the more serious problems associated with multi-family housing is that of heterogeneity or the "balanced community." However they feel that social integration is desirable as a means of promoting democracy, adding to mutual understanding, and ensuring equal access to opportunities. Also, they consider social integration to be consistent with ensuring that lower cost housing alternatives are not overly concentrated into stigmatized, oppressive enclaves with limited privacy and amenities. Furthermore, the concept of socially mixed communities is supported by the General Plan, which sets out "to create in the suburbs, by the physical development of land, socially integrated communities, within which may be enjoyed the highest

standards of safety, health, convenience and privacy."[6] Apparently, planners have interpretated this as meaning that neighbourhoods should be developed with a full range of housing types, integrated at the neighbourhood level. At all events, Edmonton's neighbourhoods have become more heterogeneous, and it is this which poses one of the most important issues facing suburban planners today.

In an attempt to address this issue, the Planning Department has prepared a report entitled, Guidelines for the Distribution and Design of Neighbourhood Density.[7] A number of guidelines are suggested which represent some significant changes in neighbourhood planning. For example, it is suggested that District Outline Plan areas should be heterogeneous, while neighbourhoods and especially sub-neighbourhoods should be more homogeneous.[8] Also, it suggests that only physically compatible forms of housing should be adjacent to one another, and that more housing with single family characteristics should be provided.[9] Furthermore, the size of multi-family sites should be much smaller and subsidized housing sites should be as

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[6] City of Edmonton, General Plan, 1967, p. 5.4.

[7] City of Edmonton, Planning Department, Guidelines for the Distribution and Design of Neighbourhood Density, July, 1978.

[8] Ibid.

[9] Ibid.

small as practicable.[10] Finally, the use of formal sub-neighbourhoods with an identifiable character is strongly encouraged in neighbourhood design.[11] It is important to note that these suggested recommendations directly parallel the concerns expressed by residents of the Richfield Neighbourhood Unit.

It might also be said that Edmonton's planners are at last beginning to heed the warning which Gans provided in his benchmark article on the "balanced" community as long ago as 1961. He argues that both homogeneity and heterogeneity are required, and that planners must strive to strike a delicate balance between the two.[12] However, the conflict between heterogeneity and homogeneity is a deep-rooted problem that cannot be solved simply by varying the mix of dwelling units in neighbourhoods. As Gans points out, the larger problem is that of the economic and social inequalities of modern society.[13] He claims that we must strive to reduce these inequalities so that the opportunities will exist for all people to make choices.[14] The

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[10] Ibid.

[11] Ibid.

[12] H. J. Gans, "The Balanced Community: Homogeneity or Heterogeneity in Residential Areas," in Journal of the American Institute of Planners, Vol. 27, No. 3, August, 1961.

[13] Ibid., p. 182.

[14] Ibid.

elimination of deprivation cannot be achieved by physical planning methods, such as public housing and Capital City Parks. The problems are far more deep-roooted than that, and physical planning methods are of little relevance to them.

This research has stressed the importance of including post-plan evaluations in the residential planning process. For example, if Edmonton's planners had re-evaluated their designs they would have discovered much earlier that people prefer to live in neighbourhoods with others of similar background characteristics. Furthermore, these findings support Gans' theory that homogeneity among residents is a very important contributor to residential satisfaction.

Potential for Future Research

This study has clarified some needs for further geographical and planning research. For example, a quantitative assessment of residential satisfaction has theoretical implications as well as potential practical applications for planning agencies. If for instance, a household's preferences for attributes of a residence and a residential environment were more fully understood, and if this understanding could be extended from individuals to aggregates of identifiable groups of households with similar preferences then we could add to our ability to

construct usable models of urban growth.

This research could not offer conclusions as to whether Edmonton's planners are designing more satisfactory living environments now than they did during the 1950s. This suggests a direction for future research in which several neighbourhoods planned and developed during the different time periods are examined. However, it does provide a methodology that planners could use to re-evaluate the effectiveness of their designs. For example, it could be used to examine the concept of "balanced" communities in order to develop criteria that could be used to determine what constitutes a more satisfactory housing mix in new suburban development. Furthermore, since the study identified densities as being a major concern, a possible avenue for future research might be to test the perceptual variations among residents regarding the distribution of populations within new residential areas. Finally, the findings of the Richfield Neighbourhood Study could be used to develop hypotheses concerning the relationship between residential satisfaction and planned neighbourhood environments.

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APPENDICES

APPENDIX A

RESIDENTIAL QUESTIONNAIRE

Please Leave Blank

Date _____

Length of Interview _____

Address _____

Respondent was: Male _____ 1

Female ___ 2 _____

Code Number _____

1. How long have you been living in this neighbourhood?

   Less than 6 months _____ 1
   6 - 11 months _____ 2
   12 - 17 months _____ 3
   18 - 23 months _____ 4
   24 - 29 months _____ 5
   30 - 35 months _____ 6
   36 months and over _____ 7 _____

2. Where did you live before moving to this neighbourhood?

   _____ _____

3. Do you own or rent this dwelling?

   Own _____ 1
   Rent _____ 2 _____

4. How many cars are owned and operated by people living in this dwelling unit?

Please Leave Blank

None _____ 1
1 _____ 2
2 _____ 3
3 _____ 4
4 _____ 5
5 _____ 6
More than 5 _____ 7 _____

5. Are you married or single?

Married _____ 1
Single _____ 2
Other _____ 3 _____

6. How many children do you have living at home?

If none, go to Q 8.

None _____ 1
1 _____ 2
2 _____ 3
3 _____ 4
4 _____ 5
5 _____ 6
More than 5 _____ 7 _____

7. How many are in each of the following categories?

		Please Leave Blank
Pre-School	___ 1	_____
Elementary	___ 2	_____
Junior High School	___ 3	_____
Senior High School	___ 4	_____
Trade School	___ 5	_____
Business College	___ 6	_____
University	___ 7	_____
Other - Please Specify _____	___ 8	_____

8. What is your present age?

Age _____ __ __

9. What type of work do you most often do?

Type of work _____ _____

10. What is the highest level of education you have achieved?

Grade 8 or less	___ 1
Grade 9 to 12	___ 2
Business College	___ 3
Technical Training	___ 4
Some University	___ 5
Undergraduate	___ 6
Graduate Degree	___ 7
Other - Please Specify _____	___ 8

11. Where is most of your grocery shopping done?

Please Leave Blank

Name _____

Street _____

Avenue _____ _____

12. If not done at Lee Ridge Shopping Centre, why not?

Please rank responses

_____ _____

_____ _____

_____ _____

I would now like to ask you some questions about this neighbourhood

13. What are some of the things you like most about living in this neighbourhood? Things that you think are advantages.

Please rank the 3 most important.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

14. What are some of the things you don't like about living in this neighbourhood? Things that you think are disadvantages.

Please Leave Blank

Please rank the 3 most important.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

15. How satisfied are you with the location of the elementary schools in the neighbourhood? Would you say you were:

Very Satisfied	Satisfied	Don't Care
1	2	3

Dissatisfied	Very Dissatisfied
4	5

_____

16. How satisfied are you with the location of grocery stores? Would you say you were:

Very Satisfied	Satisfied	Don't Care
1	2	3

Dissatisfied	Very Dissatisfied
4	5

_____

17. How satisfied are you with the public bus service near your home? Would you say you were:

Please Leave Blank

Very Satisfied	Satisfied	Don't Care
1	2	3

Dissatisfied	Very Dissatisfied
4	5

_____

18. How satisfied are you with the outdoor play areas for children? Would you say you were:

Very Satisfied	Satisfied	Don't Care
1	2	3

Dissatisfied	Very Dissatisfied
4	5

_____

19. How satisfied are you with the public recreation facilities in your neighbourhood? Would you say you were:

Very Satisfied	Satisfied	Don't Care
1	2	3

Dissatisfied	Very Dissatisfied
4	5

_____

20. How satisfied are you with privacy available to you when you are in the yard around your home?
Say balcony for apartment house when such space is available.

Please Leave Blank

Would you say you were:

Very Satisfied	Satisfied	Don't Care
1	2	3

Dissatisfied	Very Dissatisfied
4	5

21. How satisfied are you with the pedestrian walkways in your neighbourhood? Would you say you were:

Very Satisfied	Satisfied	Don't Care
1	2	3

Dissatisfied	Very Dissatisfied
4	5

22. Would you please tell me the letter on this card which best represents your approximate total family income for 1977?

Please Leave Blank

A. Under $2,000	_____	01
B. $2,000 - $2,999	_____	02
C. $3,000 - $3,999	_____	03
D. $4,000 - $4,999	_____	04
E. $5,000 - $5,999	_____	05
F. $6,000 - $6,999	_____	06
G. $7,000 - $7,999	_____	07
H. $8,000 - $9,999	_____	08
I. $10,000 - $11,999	_____	09
J. $12,000 - $14,999	_____	10
K. $15,000 - $17,499	_____	11
L. $17,500 - $19,999	_____	12
M. $20,000 - $22,499	_____	13
N. $22,500 - $24,999	_____	14
O. $25,000 - $29,999	_____	15
P. $30,000 - $34,999	_____	16
Q. $35,000 and over	_____	17
Don't Know	_____	18
No Answer	_____	19

__ __

For Interviewer Use Only

Please Leave Blank

23. Dwelling Type:

Single detached _____	1	
Duplex _____	2	
Fourplex _____	3	
3-Storey Walkup _____	4	
Medium-rise (4-10 Floors)_____	5	
Highrise _____	6	
Row Housing _____	7	
Basement Suite _____	8	
Other - Please specify _____	9	_____

24. Additional Comments:

_____

_____

_____

_____

_____

APPENDIX B

THINGS RESIDENTS LIKED ABOUT LIVING IN THE NEIGHBOURHOOD

Rank 1

DESIGN FACTOR

Pedestrian Walkways

Open Space

Crescent

ACCESSIBILITY FACTOR

Good access to place of work

Good access to downtown Edmonton

Good access to service facilities

Good access to and from neighbourhood

PROXIMITY FACTOR

Close to place of work

Close to elementary schools

Close to grocery shops

Close to university

Close to University Hospital

Close to Grant McEwan College

QUIET FACTOR

Very little traffic

Less noisy than downtown Edmonton

DWELLING FACTOR

Nice home - attractive and well-designed

Co-operative housing

ECONOMIC FACTOR

Cost of housing and lot cheaper

Cheaper rent

SOCIAL FACTOR

Community-minded spirit of people

Friendly neighbours - shared interests and values

Good neighbours

Neighbours in the same age group as myself and my children

Friends live in neighbourhood

Close to family members

SUBURBAN FACTOR

Away from the main city

Small town atmosphere

PRIVACY FACTOR

Nobody bothers you

Rank 2

DESIGN FACTOR

Pedestrian Walkways

Buffer strips and berms

More open space around dwelling units

ACCESSIBILITY FACTOR

Good access to place of work

Good access to downtown Edmonton

Good access to grocery shops

Good access to and from neighbourhood

Good access to any part of the city

PROXIMITY FACTOR

Close to place of work

Close to downtown Edmonton

Close to elementary schools

Close to grocery shops

Close to playground facilities

Close to University

Close to recreation facilities

Close to church

Close to park areas

Close to bus stop

QUIET FACTOR

Less noise from traffic

Away from noise of the city

DWELLING FACTOR

Like house - attractive and well-designed

More room in this dwelling than in previous dwelling

More freedom, room, and outdoor space than living in an apartment

ECONOMIC FACTOR

Cost of housing and lot cheaper

Cheaper rent

SOCIAL FACTOR

Good neighbours

Many people in same age group as myself and my children

Good church group

Community-minded spirit of people

Relatives live in Mill Woods

Many friends in neighbourhood

SUBURBAN FACTOR

Away from main city

Rural atmosphere

Small-town atmosphere

SERVICE FACTOR

Good bus service

Playgrounds well supervised during the summer

Rank 3

DESIGN FACTOR

Pedestrian walkways

Buffer strips and berms

Open space

Safe roadway layout

Layout of housing groups - some housing groups face open spaces rather than streets

ACCESSIBILITY FACTOR

Good access to downtown Edmonton

Good access to grocery shops

Good access to place of work

Good access to any part of the city

PROXIMITY FACTOR

Close to downtown Edmonton

Close to elementary schools

Close to grocery shops

Close to family members

Close to bus stop

Close to place of work

Close to businesses

Close to recreation facilities

QUIET FACTOR

Away from noisy traffic

ECONOMIC FACTOR

Housing available for all income groups

Cheaper rent

Own a share in co-operative housing development

SOCIAL FACTOR

Good neighbours

Young families with children

Community-minded spirit of people

People of my own social status

Different ethnic groups

People help one another

SUBURBAN FACTOR

Away from the main city

SERVICE FACTOR

Good bus service

PRIVACY FACTOR

More privacy than previous place

APPENDIX C

THINGS RESIDENTS DISLIKED ABOUT LIVING IN THE NEIGHBOURHOOD

Rank 1

DESIGN FACTOR

Too much multi-family housing

Confusing street layout

Public housing is too concentrated

Play areas for pre-school children not fenced

Lack of roadways out of neighbourhood

Lack of park space

Not enough pedestrian walkways

FACILITY FACTOR

Lack of public recreation facilities

Lack of a variety of shopping facilities

Lack of a major department store

Lack of entertainment facilities

Lack of a senior high school

Lack of day-care facilities

Lack of a junior high school

Lack of a postal station

Lack of service stations

ISOLATION FACTOR

Too far from downtown Edmonton

Too far out of the way for people visiting

Too far from place of work

Too far from major shopping facilities

Too far from major recreation facilities

Too far from university

SOCIAL FACTOR

Too many kids with lack of parental guidance

Too much theft and vandalism

Inconsiderate neighbours

Too many East Indians - will not participate in community activities

Lack of respect of people in public housing towards the housing development

Behavioral problems of people living in public housing

SERVICE FACTOR

Slow bus service

Lack of police patrols

MAINTENANCE FACTOR

Poor street maintenance

DWELLING FACTOR

Apartment building is not kept clean

Should be a fence around public housing unit

AESTHETIC FACTOR

Sterile appearance - lack of parks and trees

Yards in neighbourhood unattractive

Rank 2

DESIGN FACTOR

Too much multi-family housing

Lack of recreation areas

Confusing Street layout

Not enough access roads to and from neighbourhood

Lack of leisure park space

Laneless subdivisions

Too much public housing

Public housing is too concentrated

Streets are too narrow

FACILITY FACTOR

Lack of a senior high school

Lack of a junior high school

Lack of playground facilities

Lack of a variety of shopping facilities

Lack of public recreation facilities

Lack of a major department store

Lack of day-care facilities

Lack of entertainment facilities

Lack of bus stop shelters

ISOLATION FACTOR

Too far to go to conduct business

Too far from major shopping facilities

SOCIAL FACTOR

Don't care attitude of people living in public housing

Lack of parental guidance resulting in behavioral problems among kids

Too many East Indians

Too many Metis

Too much discrimination against racial groups

Too much vandalism

Unfriendly people in neighbourhood

Antisocial behavior of people living in public housing

SERVICE FACTOR

Lack of dental services

Poor bus service

MAINTENANCE FACTOR

Poor street maintenance

Lack of maintenance on public housing

Lack of maintenance on pedestrian walkways

DWELLING FACTOR

Orientation of dwelling unit does not allow for exposure to sunlight

AESTHETIC FACTOR

Lack of trees

Lack of amenity parks

Unclean neighbourhood

Rank 3

DESIGN FACTOR

Too much multi-family housing

Confusing street layout

Laneless subdivisions

Lack of open space

Too much public housing

Need another road outlet from neighbourhood

FACILITY FACTOR

Lack of a junior high school

Lack of a senior high school

No variety in shopping facilities

Lack of day-care facilities

Lack of entertainment facilities

Lack of a large multi-purpose shopping facility

Lack of public recreation facilities

ISOLATION FACTOR

Too far from downtown Edmonton

SOCIAL FACTOR

Not a neighbourly environment

Lack of community organized functions

Noisy neighbours

Lack of parental guidance resulting in behavioral problems among teenagers

SERVICE FACTOR

Slow bus service

Lack of police patrols

MAINTENANCE FACTOR

Lack of maintenance on public housing

Poor roadway maintenance

Poor maintenance on pedestrian walkways

DWELLING FACTOR

Dwelling unit is too expensive

AESTHETIC FACTOR

Lack of amenity parks

Lack of trees